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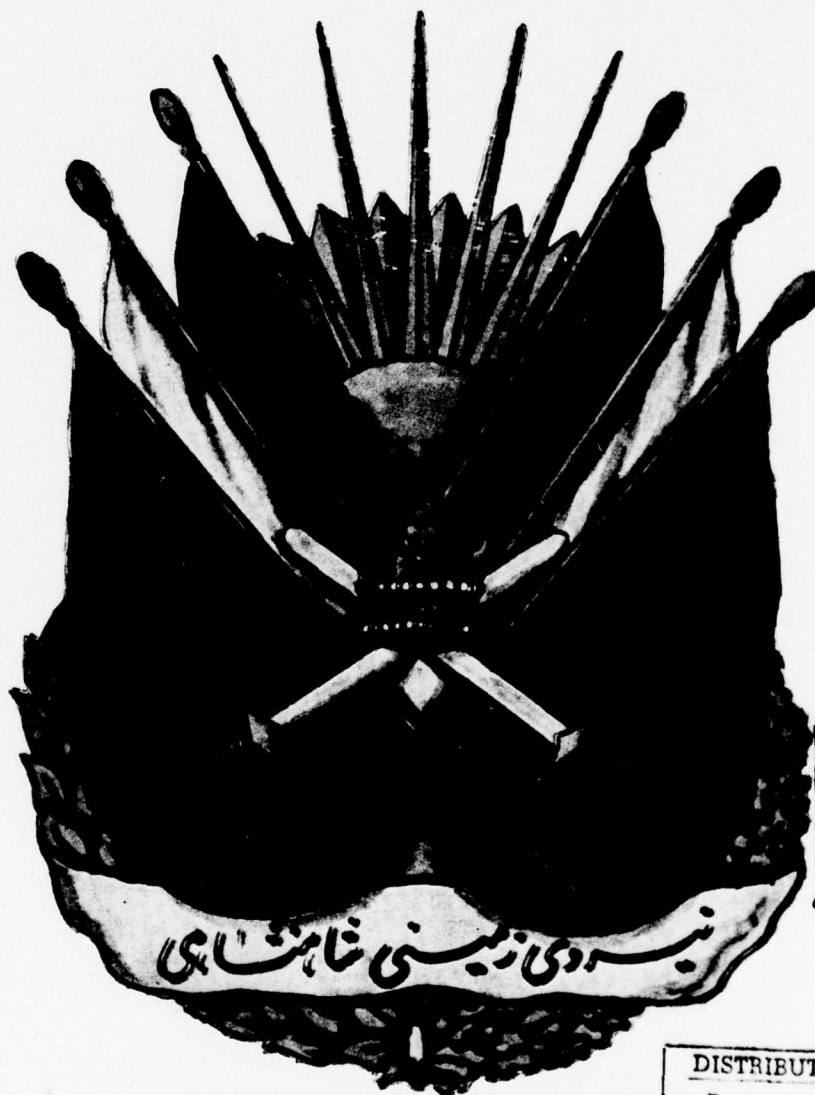


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IMPERIAL IRANIAN GROUND FORCES.
COMBAT RESEARCH AND EVALUATION CENTER.



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ANTHROPOMETRIC SURVEY
OF THE
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VOLUME I

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TECHNICAL REPORT,
OF THE

COMBAT RESEARCH AND EVALUATION CENTER
IMPERIAL IRANIAN GROUND FORCES

6

VOLUME I

ANTHROPOMETRIC SURVEY OF THE
IMPERIAL IRANIAN ARMED FORCES. Volume I.
Data Collection and Analysis,

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Lt. Col. Doctor/Shoja-eddin/Noorani
Clarence N./Dillard, Jr.

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ACKNOWLEDGEMENTS

The authors of this report wish to acknowledge the fine cooperation of the three branches of the Imperial Iranian Armed Forces which enabled the Combat Research and Evaluation Center to collect the essential data for this study. The contribution of the Electronic Computation Center of the Imperial Iranian Armed Forces Comptroller's Department in processing the field data is greatly appreciated.

Special mention is made of the invaluable contribution to this project by Mr. Robert M. White, U.S. Army Natick Laboratories, Natick, Massachusetts, Dr. Edmund Churchill, Consultant, Mr. Herbert W. Kress, Research Triangle Institute Field Party Chief in Iran, and Mr. Walter A. Hendricks, Research Triangle Institute Statistician.

SUMMARY

An anthropometric survey of the Imperial Iranian Armed Forces was undertaken by the Combat Research and Evaluation Center (CREC), at the direction of the Vice Chief of the Supreme Commander's Staff, Lt. General Fereidun Djam, in April, 1968.

The main objective of the survey was to provide the Imperial Iranian Armed Forces a basis for determining how to improve their uniforms and tariffs. At the same time, it would demonstrate the value of CREC as the Iranian center for military-oriented research.

The project officer and research team developed a comprehensive survey plan, which was approved by the Chief of CREC. The team arranged for consultants' services and procured equipment and supplies for the data collection phase of the survey. Data collection began November 20, 1968, and ended March 19, 1969. Of the 9,417 subjects drawn from the three branches of the Imperial Iranian Armed Forces, 3,187 were measured in units located in Tehran and 6,230 in installations in other regions of Iran. This was to obtain, insofar as possible, a broad sample of personnel to represent the various ranges and sizes of ethnic groupings of personnel within the Imperial Iranian Armed Forces.

The data were processed by the Electronic Computation Center of the Imperial Iranian Armed Forces Comptroller's Department, where 47,050 unit record cards were punched and the data transferred to magnetic tape for automated data processing. The statistical analysis includes (1) the mean values, standard deviations, percentiles, and range distributions;

(2) extreme values, and (3) bivariate tables of the data.

Finally, the task of developing recommendations on a standard sizing system, tariffs and pattern designs for the Imperial Iranian Armed Forces has been initiated by the program sponsors, the Advanced Research Projects Agency of the United States Department of Defense, through the United States Army Natick Laboratories.

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CREC Anthropometric Survey

I. INTRODUCTION

The assignment to the Combat Research and Evaluation Center (CREC) of the responsibility for carrying out an anthropometric survey of the Imperial Iranian Armed Forces was undertaken with considerable material support from a team of consultants. Successful accomplishment of the project with this support was judged feasible by the Vice Chief of the Supreme Commander's Staff. The research team developed a methodology for the anthropometric survey, planned and executed the data collection phase, assumed the responsibility for providing the Imperial Iranian Armed Forces with the results of a statistical analysis of the data, and initiated plans for the utilization of the data by the Imperial Iranian Armed Forces.

II. BACKGROUND

The Vice Chief of the Supreme Commander's Staff, being acquainted with and realizing the importance of other anthropometric surveys, believed that an anthropometric survey should be made of the armed forces of Iran. This had never been accomplished before in Iran. He was interested in plans that would revise the present uniforms of the Imperial Iranian Armed Forces, and in issuing ready-made uniforms to officers and noncommissioned officers as well as to recruits and privates. Clothing issued to recruits and privates is manufactured by the IIGF Quartermaster Department Clothing and Boot Factory according to sizing and tariff tables that have been in effect for many years.

The Vice Chief of SCS considered these uniforms below the desired standard of fit, design, and appearance. He desired to improve the present uniform sizing tables and uniform designs, since revised patterns and tariffs were long overdue. He felt that the results of an anthropometric survey of the Imperial Iranian Armed Forces were indispensable to the achievement of this aim.

The mission of performing this research project for the Imperial Iranian Armed Forces was assigned to CREC. At the same time, he recognized that CREC did not have the capability of performing all phases of an anthropometric survey without technical assistance and material support. Reports of previous anthropometric studies were reviewed and a program was designed to meet the needs of Iran. The organization required experience in investigating problems; assistance in the preplanning phase; statistical analysis of the anthropometric data; and development of recommendations addressed to the immediate problems of sizing and tariffs. These services were acquired by assigning consultants experienced in these fields to the CREC team.

III. OBJECTIVES

The objectives of the Anthropometric Survey of the Imperial Iranian Armed Forces were:

- a) To provide the Vice Chief, Supreme Commander's Staff, a basis for decisions related to planned revision of Imperial Iranian Armed Forces uniforms and tariffs.

- b) To enhance the capabilities of the Combat Research and Evaluation Center in the planning and execution of military-oriented research projects through the utilization of improved research techniques under a "learning-by-doing" approach.

IV. PROGRAM PLANNING

The Technical Research Plan initially prepared to achieve authorization for the project required more detail before work could proceed efficiently toward the project objectives. Accordingly, some preplanning was necessary for the development of an effective data collection/analysis plan.

A. Preplanning

With the full support of the Chief, ARMISH/MAAG and assisted by the Research Triangle Institute Field Party Chief, Mr. Herbert W. Kress, Mr. Walter A. Hendricks, a Research Triangle Institute senior statistician, undertook a study of the available literature in the United States. He consulted with Mr. Robert M. White, a widely recognized anthropologist at the U.S. Army Natick Laboratories on the development of an Anthropometric Survey of the Imperial Iranian Armed Forces.

Mr. Hendricks traveled to Iran, was introduced to the Chief, CREC and began working with the research officers of CREC who provided pertinent information about the personnel and organizational structure of the Imperial Iranian Armed Forces. On the basis of this preliminary study, a sample design, a list of physical measurements and background data, format of the data recording form, list of anthropometric measuring instruments and equipment, methodology for data collection operations, and data collection instruction manual were developed.

As soon as sufficient information had been accumulated to provide a substantial outline for the data collection phase of the survey, briefings were held for the Vice Chief, Supreme Commander's Staff, and the Chief of the Imperial Iranian Ground Forces Quartermaster Department.

The results of the preplanning study were documented in the form of a proposed research plan in which all essential steps were described and discussed at length. A copy of the plan was coordinated among the consultants for comments and recommendations. Concurrently, Mr. White was engaged to supervise the training of the measuring team personnel in Iran and to advise and assist them at the beginning of data collection operations.

B. Development of Plan

Lt. Col. Dr. Shoja-eddin Noorani was assigned to the anthropometric survey as project officer by the Chief of CREC on May 20, 1968. Dr. Noorani reviewed a recommended approach to developing a comprehensive plan for the entire project. The recommended procedure included a technical research plan and a detailed research plan describing each essential step in the entire study as a task and provided for submission of reports on completion of tasks.

To facilitate the acceptance of these recommendations, a model Technical Research Plan (Appendix A) and Detailed Research Plan (Appendix B) were prepared for the guidance of the project officer. These documents listed tasks and sub-tasks for which designated individuals would assume responsibility. Incorporated into the plan were the basic steps already accomplished in designing the methodology of the survey and preparing the draft form and manual. Procuring anthropometric instruments and equipment, printing forms and manuals, reducing the data, and providing the results of statistical analysis were tasks assigned to team members. The project officer was responsible for ensuring that the results

of all tasks related to the data collection phase conformed to the needs and circumstances of the Imperial Iranian Armed Forces, preparing and executing the data collection operation, and preparing the final report.

The Chief of CREC approved the plan and directed on September 15, 1968, that it be implemented.

V. DATA COLLECTION PHASE

A. Preparations

- 1) The Project Officer and the CREC research team reviewed the drafts of the data recording form and data collection instruction manual and modified them in the light of further study. For example, a simple eye test and color blindness check were introduced, the list of civilian occupations was expanded to include "Herdsmen", and provision was made to record the number of siblings by sex and age relationship to the subject. As it was found impracticable to prepare a data recording form listing the items in both English and Farsi, separate language versions were prepared and 11,000 copies printed in Farsi and 50 copies in English (Figures 1a, 1b). The Data Collection Instruction Manual (Appendix D) was printed in both languages in parallel format.
- 2) Ten anthropometers, six small sliding calipers, two spreading calipers, two foot-measuring boxes, two color blindness test booklets, and four dozen steel measuring tapes were procured in the United States and sent to Iran. Three scales, three types of eye test charts, three foot-leveling board kits, and miscellaneous supplies (e.g., pencils, instrument cleaning supplies) were bought in Tehran.

IMPERIAL IRANIAN ARMED FORCES ANTHROPOMETRIC SURVEY - DATA RECORDING FORM

STATION 1		STATION 2		STATION 3		STATION 4	
NAME - 1		NAME - 2		NAME - 3		NAME - 4	
RANK - 1		RANK - 2		RANK - 3		RANK - 4	
BRANCH - 1		BRANCH - 2		BRANCH - 3		BRANCH - 4	
REGIMENT - 1		REGIMENT - 2		REGIMENT - 3		REGIMENT - 4	
COMPANY - 1		COMPANY - 2		COMPANY - 3		COMPANY - 4	
PLATOON - 1		PLATOON - 2		PLATOON - 3		PLATOON - 4	
BATTALION - 1		BATTALION - 2		BATTALION - 3		BATTALION - 4	
DIVISION - 1		DIVISION - 2		DIVISION - 3		DIVISION - 4	
CORPS - 1		CORPS - 2		CORPS - 3		CORPS - 4	
ARMY - 1		ARMY - 2		ARMY - 3		ARMY - 4	
NAVY - 1		NAVY - 2		NAVY - 3		NAVY - 4	
AIR FORCE - 1		AIR FORCE - 2		AIR FORCE - 3		AIR FORCE - 4	
OTHER - 1		OTHER - 2		OTHER - 3		OTHER - 4	
DATE OF BIRTH - 1		DATE OF BIRTH - 2		DATE OF BIRTH - 3		DATE OF BIRTH - 4	
PLACE OF BIRTH - 1		PLACE OF BIRTH - 2		PLACE OF BIRTH - 3		PLACE OF BIRTH - 4	
MILITARY SERVICE - 1		MILITARY SERVICE - 2		MILITARY SERVICE - 3		MILITARY SERVICE - 4	
MILITARY SERVICE - 5		MILITARY SERVICE - 6		MILITARY SERVICE - 7		MILITARY SERVICE - 8	
MILITARY SERVICE - 9		MILITARY SERVICE - 10		MILITARY SERVICE - 11		MILITARY SERVICE - 12	
MILITARY SERVICE - 13		MILITARY SERVICE - 14		MILITARY SERVICE - 15		MILITARY SERVICE - 16	
MILITARY SERVICE - 17		MILITARY SERVICE - 18		MILITARY SERVICE - 19		MILITARY SERVICE - 20	
MILITARY SERVICE - 21		MILITARY SERVICE - 22		MILITARY SERVICE - 23		MILITARY SERVICE - 24	
MILITARY SERVICE - 25		MILITARY SERVICE - 26		MILITARY SERVICE - 27		MILITARY SERVICE - 28	
MILITARY SERVICE - 29		MILITARY SERVICE - 30		MILITARY SERVICE - 31		MILITARY SERVICE - 32	
MILITARY SERVICE - 33		MILITARY SERVICE - 34		MILITARY SERVICE - 35		MILITARY SERVICE - 36	
MILITARY SERVICE - 37		MILITARY SERVICE - 38		MILITARY SERVICE - 39		MILITARY SERVICE - 40	
MILITARY SERVICE - 41		MILITARY SERVICE - 42		MILITARY SERVICE - 43		MILITARY SERVICE - 44	
MILITARY SERVICE - 45		MILITARY SERVICE - 46		MILITARY SERVICE - 47		MILITARY SERVICE - 48	
MILITARY SERVICE - 49		MILITARY SERVICE - 50		MILITARY SERVICE - 51		MILITARY SERVICE - 52	
MILITARY SERVICE - 53		MILITARY SERVICE - 54		MILITARY SERVICE - 55		MILITARY SERVICE - 56	
MILITARY SERVICE - 57		MILITARY SERVICE - 58		MILITARY SERVICE - 59		MILITARY SERVICE - 60	
MILITARY SERVICE - 61		MILITARY SERVICE - 62		MILITARY SERVICE - 63		MILITARY SERVICE - 64	
MILITARY SERVICE - 65		MILITARY SERVICE - 66		MILITARY SERVICE - 67		MILITARY SERVICE - 68	
MILITARY SERVICE - 69		MILITARY SERVICE - 70		MILITARY SERVICE - 71		MILITARY SERVICE - 72	
MILITARY SERVICE - 73		MILITARY SERVICE - 74		MILITARY SERVICE - 75		MILITARY SERVICE - 76	
MILITARY SERVICE - 77		MILITARY SERVICE - 78		MILITARY SERVICE - 79		MILITARY SERVICE - 80	
MILITARY SERVICE - 81		MILITARY SERVICE - 82		MILITARY SERVICE - 83		MILITARY SERVICE - 84	
MILITARY SERVICE - 85		MILITARY SERVICE - 86		MILITARY SERVICE - 87		MILITARY SERVICE - 88	
MILITARY SERVICE - 89		MILITARY SERVICE - 90		MILITARY SERVICE - 91		MILITARY SERVICE - 92	
MILITARY SERVICE - 93		MILITARY SERVICE - 94		MILITARY SERVICE - 95		MILITARY SERVICE - 96	
MILITARY SERVICE - 97		MILITARY SERVICE - 98		MILITARY SERVICE - 99		MILITARY SERVICE - 100	

Fig. 1a. Data Recording Form (English) Front

مطابق ۱۳۷۴ - ۱۳۷۵

Fig. 1b. Data Recording Form (English) Back

- 3) On the basis of the design of the sample, the project officer drew up the schedule of units to be visited, indicating dates of travel, periods of measuring operations, and the number and types of subjects requested from each unit (Figure 2).
- 4) The Project Officer obtained agreement from the Imperial Iranian Ground Forces Medical Department to place seven noncommissioned officers on special duty with CREC to serve as measuring team personnel. The offer of the Medical Department also to provide the services of three medical officers, one from each Army area, was accepted. The Imperial Iranian Ground Forces Quartermaster Department agreed to provide eight noncommissioned officers as team members.
- 5) The project officer notified the headquarters of the three forces of the schedule of data collection visits.
- 6) The CREC research team prepared the outline and charts (see Attachment A of the Data Collection Instruction Manual, Appendix D) for briefing installation commanders whose units were scheduled to provide subjects and arranged transportation by aircraft to Birjand, Kerman, Bandar-Pahlavi, Ajabshir, Khorramabad, and Khorramshahr. The project officer obtained clearance for these trips and notified the installation commanders.
- 7) The project officer prepared the schedule and program for training the measuring team members. Instructional materials included the charts prepared for the briefings and the draft data collection instruction manual.

**Method of Implementation of Anthropometry
Plan for Imperial Iranian Armed Forces**

Name of Units	Offi- cers	Stu- dents	MCs or Privates	Total Compa- nies	Departure Date	Arrival Date	Preparatory Work	Days for Mea- sure- ments	Date of Completion	Return Date
301st Cadre Training Center, Tehran	40	100	990	1130	9	Nov 20, 1968	Nov 20, 1968	8	Nov 30, 1968	-
304th Training Center, Birjand	40	100	1000	1140	5	Dec 2, 1968	Dec 2, 1968	8	Dec 10, 1968	Dec 11, 1968
Northern Naval Base, Bandar-Pahlavi	15	200	-	215	-	Dec 16, 1968	Dec 17, 1968	2	Dec 19, 1968	Dec 20, 1968
Officers Academy, Tehran	13	320	-	333	12	-	Dec 22, 1968	Dec 22, 1968	3	Dec 25, 1968
303d Training Center, Ajabshir	56	140	1400	1596	7	Dec 27, 1968	Dec 28, 1968	11	Jan 8, 1969	Jan 9, 1969
Doshantappeh Air Base, Tehran	50	700	-	750	-	-	Jan 11, 1969	Jan 11, 1969	5	Jan 18, 1969
305th Training Center, Kerman	32	80	900	912	4	Jan 20, 1969	Jan 20, 1969	6	Jan 26, 1969	Jan 27, 1969
Military University, Tehran	19	480	-	499	3	-	Feb 1, 1969	Feb 1, 1969	4	Feb 5, 1969
302d Training Center, Khorramabad	56	140	1400	1596	7	Feb 7, 1969	Feb 8, 1969	11	Feb 19, 1969	Feb 20, 1969
Pahlavi Brigade No.2, Tehran	6	160	-	166	1	-	Feb 24, 1969	Feb 24, 1969	2	Feb 26, 1969
Special Forces Units, Tehran	6	160	-	166	1	-	Mar 1, 1969	Mar 1, 1969	2	Mar 3, 1969
Southern Naval Base, Khorramshahr	35	400	-	435	-	Mar 4, 1969	Mar 5, 1969	3	Mar 8, 1969	Mar 9, 1969

Plan Project Officer
Maj. Dr. Shoja-uddin Noorani
November 18, 1968

Fig. 2. Translation of Data Collection Schedule

B. Briefing Visits

Commanders of installations whose units were selected to provide the subjects were briefed in a series of visits in the latter half of October, 1968, by the project officer and CREC Research Team. In sessions attended by unit commanders and staff officers, the project officer outlined the background of the survey, its objectives, methodology of data collection operations, and support to be provided by the installation. During the visits, available facilities were inspected and tentative arrangements were made for measuring space and accommodations.

C. Training of Measuring Team

The three medical officers and the fifteen noncommissioned officers of the Quartermaster and Medical Departments reported to the project officer on November 10, 1968, ten days prior to the beginning of data collection operations. They were instructed on the background and objectives of the survey, familiarized with the measuring instruments and equipment, tentatively assigned to measuring stations, and drilled in the techniques of taking measurements. During the last three days of the training period, instruction and practice sessions were supervised and assisted by Mr. Robert M. White. He continued to work closely with the team during the first three days of actual data collection.

D. Data Collection Visits

The measuring group was accompanied by the CREC Research Team analyst to every measuring site, involving approximately fifty-eight days travel outside Tehran during the four-month data collection period. Special care was taken to maintain the standards set for taking measurements, adhere as closely as possible to the design of the sample, ensure that data recording forms were

properly filled out, and safeguard instruments and forms.

1. Scope

Data collection commenced November 20, 1968, and ended March 19, 1969. In accordance with the design of the sample, subjects were drawn from the Imperial Iranian Ground Forces, Imperial Iranian Air Force, and Imperial Iranian Navy and from units stationed in different parts of the country with the aim of securing a broad representation of regional and ethnic types. Of the total of 9,417 subjects, 3,187 were measured in units located in Tehran and 6,230 in installations in other regions of Iran. A translation of the official report of the Chief of CREC upon completion of the data collection visits is attached as Appendix C.

2. Operations

The procedures set forth in the Data Collection Instruction Manual (Appendix D) were followed faithfully except in the points noted below under "E. Deviations from the Plan." The project officer worked closely with the liaison officers to ensure a steady flow of subjects to the measuring sites. He checked the measuring team and support personnel at the beginning of each day's operations and made necessary adjustments in duty assignments. Assisted by the three medical officers, the project officer made spot checks of performance by all personnel. As predicted by Mr. White, the measuring team members became highly proficient during the first week of operations and performed very well throughout the survey.

E. Deviations from the Plan

1. Schedule

- a) The original schedule was drawn up on the assumption that military air transportation would be utilized for the trips to Birjand, Kerman, and Khorramabad. Uncertain weather conditions and flight plan cancellations made it necessary to travel to these installations by bus and rail. However, measuring operations proceeded on schedule except at Birjand, where they were begun one day late.
- b) The Air Force base in Shiraz was added to the schedule in order to include flying personnel, since the Imperial Iranian Air Force Headquarters at Doshan Tappeh, Tehran, was unable to provide subjects in this category.

2. Operations

- a) On the recommendation of Mr. White, physical measurement No. 34 (Maximum Forearm-Forearm Breadth) was deleted. It was so nearly a duplication of physical measurement No. 33 (Elbow-Elbow Breadth) that he considered it superfluous. Therefore, the measurer was instructed to omit it and the recorder was instructed to fill the spaces on the data recording form with zeros.
- b) The instructions for taking physical measurement No. 41 (Inter-scye Maximum) specified the distance between the two scye points. Owing to the difficulty in identifying scye points after the arms were extended forward, this measurement was changed on Mr. White's recommendation to represent the distance between the armpits.

- c) The instructions for taking physical measurement No. 69 (Instep Length) specified the distance from the widest part of foot (from the bony protrusion behind the big toe marking the ball of foot) to heel. The measurement was actually taken from the point immediately behind this bony protrusion.
- d) Utilization of military serial number, although planned, was not implemented.
- e) It was found that some control over the flow of subjects was required by the local units. An unofficial "Station 11" was set up using support personnel to keep a roster of subjects whose forms were completed.

3. Reports

With the exception of the description of the sample, schedule of visits, and report of completion of data collection, reports to the Chief of CREC were informal rather than written as called for in the Detailed Research Plan. The final task of the anthropometric survey data collection and analysis phases is completed with the submission and approval of this report.

F. Lessons Learned and Difficulties Encountered

- 1) The preparation, review, and approval of planning documents is essential to a project's success.
- 2) Oral reports and discussions are not legitimate substitutes for formal reporting.
- 3) Personal contacts were required to gain planning information and to ensure reasonable prompt response to written requests for co-operation. This is a vital part of project management.

- 4) It was sometimes difficult to arrange the facilities provided for the measuring operations for efficient flow of subjects. The problems of light and heat were serious in a few instances, but workable solutions were found, even where discomfort could not be avoided.
- 5) Although the measuring team personnel were well-trained and had developed considerable skill in taking measurements, it was inevitable that some instruments became inoperative due to wear and accidental dropping. Enough extra equipment was taken along to ensure that this did not cause any delay.

VI. DATA PROCESSING PHASE

A. Preliminary Data Processing in Iran

1. Negotiations

Upon request, Brig. Gen. Ghofranian, Chief of the Electronic Computation Center of the Imperial Iranian Armed Forces Comptroller's Department, agreed that his organization would perform the preliminary data processing of the anthropometric survey data and prepare them for transmittal to the United States. He directed the supervisor of the Electronic Computation Center to cooperate with the CREC team by punching unit record cards from the data recording forms, writing programs for editing and modifying the data as required, and transferring all data to magnetic tape.

2. Processing

The first batch of data recording forms was delivered to the Electronic Computation Center January 19, 1969. Card-punching from all forms was

completed April 26, 1969. Nine computer programs were written by the Electronics Computation Center supervisor to accomplish the processing and transfer to tape, and the tape was processed to develop the required statistics.

B. Statistical Analyses

Four sets of tabulated data have been completed. They are general characteristics of subjects, Summary Statistics and Frequency Tables, Extreme Value Statistics, and Bivariate Frequency Tables. These tabulated results will form the basis for developing master patterns specifying clothing sizes and for determining the relative quantities of sizes to be manufactured.

1. General Characteristics of Subjects

Seventeen tables have been prepared giving the percentage distribution among various categories for subjects examined in the survey. These tables cover variables one through four and six in Figure 1b. In addition, variables five through seventeen in Figure 1a are included making a total of ninety-seven variables. Note that number of siblings, marital status, languages spoken, and years of school completed allow four, two, three, and five values respectively.

2. Summary Statistics and Frequency Tables

Four sets of tables (Army, Air Force, Navy, and total) have been prepared which provide statistical information on each of sixty-nine body measurements. These measurements are identified as items five and seven through seventy-four in Figure 1b. For each variable there is a mean value, standard deviation, symmetry, kurtosis, and coefficient of variation. In addition, the percentiles and frequencies distribution is given for the sample of subjects. Tabulated results of these calculations can be found in Volume II, Part II. Values are in English system as well as the metric system.

3. Extreme Value Statistics

The extreme values for each of the ninety-seven variables are given in Volume II, Part III. The values are given in metric system only. They represent the ten largest and ten smallest subjects in the sample.

4. Bivariate Frequency Tables

The tables included in Volume II, Part IV represent the frequency relationship between two measurements as indicated for each table. Generally, these body measurements have been correlated to height and weight. In addition, they have been grouped by trunk (weight and height), head, foot, and hand. See the Table of Contents for Part IV for various parameters which have been correlated.

VII. DISCUSSION OF DATA APPLICATION PHASE

Statistical data presented in Volume II will provide the necessary information for developing standards for uniform sizes (number of sizes and dimensions) and tariffs (quantities of each size for procurement). The measurement data would also be available for other human engineering or human factor applications in military research and development. Although this phase is not part of the work completed, it is desirable to discuss the application of the data to the project objectives so as to gain a better understanding of their utility. The statistical data will form the basis for uniform master pattern development in Phase III of this project. No written information is available on the procedures for using the statistical data to make these patterns. This process requires practical, experienced, and considerable personal judgment rather than the application of specific mathematical formulas or procedures.

A. Uniform Standards

1. A Standard Design and Pattern for the Uniform

The design of the uniform should be standardized in all details and a master pattern developed which represents that design. Copies of this master pattern in the form of ozalid reproductions could then be furnished to tailors to control their cutting, or to garment contractors. From this master pattern they could grade other sizes. (Ultimately, all size patterns should be controlled).

2. Standardize Tariffs of Sizes

From the master pattern and the graded patterns for other sizes, tariffs of sizes for use in procuring balanced stocks should be developed. These can be based upon anthropometric data as related to the standard patterns.

3. Standards of Color

A standard piece of fabric for each uniform color should be set under government control. It should be approved as the standard and samples cut off from it to furnish to contractors making the fabric, for matching of shade. It should be carefully preserved from moths or other insects and from dust and dirt. No one should be allowed to cut off pieces except for shade matching. When it is used up, another piece which matches it as closely as possible, should be selected to replace it.

4. Standards of Fabric

Standard fabrics should be selected, preferably fabrics that can readily be made in the textile industry of several countries. Specifications should be prepared which describe these fabrics exactly, with adequate provisions for quality control.

5. Standard Inspection Practices

Procedures for inspection should be developed, and facilities for conducting basic tests provided to insure that the specification requirements are met. This will necessitate the use of a small laboratory. The Institute of Standard & Industrial Research textile laboratory is suggested as a possible candidate to accomplish this work.

B. Technical Control

Technical competence to carry out development of uniforms should be developed within the Imperial Iranian Armed Forces. The task of standardizing the technical control of the development, production and procurement of uniforms for the Imperial Iranian Armed Forces should be centralized in one agency for efficiency and cost effectiveness.

VIII. CONCLUSIONS

The completion of the data collection and analysis phases of the anthropometric survey by the Combat Research and Evaluation Center was successful. This project demonstrates the ability of this organization to develop a detailed research plan and carry it through to completion. It has provided an excellent opportunity to gain data collection and technical analyses experience.

The statistical data developed under this project will prove valuable in developing pattern standards for any revisions to the uniforms of the Imperial Iranian Armed Forces. Moreover, they will prove useful to human engineering tasks associated with the development of equipments and facilities to be used by military personnel.

IX. RECOMMENDATIONS

It is recommended that Phase III involving the utilization of this anthropometric data to standardize uniform sizes and tariffs be completed as soon as possible. Further, that the data be utilized in developing a human engineering data handbook specifically designed to meet the needs of the Imperial Iranian Armed Forces.

APPENDIX A

Technical Research Plan

IMPERIAL IRANIAN ARMY
COMBAT RESEARCH AND EVALUATION ORGANIZATION

Technical Research Plan

Anthropometric Survey
of the
Imperial Iranian Armed Forces

by

Major Doctor Shoja-eddin Noorani

August 26, 1968

I. REFERENCES

- A. Memorandum from the Vice Chief, Supreme Commander's Staff (SCS), to the Advisory Staff (ARISH/MAAG), 11 April 1967.
- B. Representation approved 2 May 1968 by His Imperial Majesty the Shahanshah Arya Mehr.
- C. Memorandum from the Director, J-8 Division, ARISH/MAAG, to the Chief, Combat Research and Evaluation Organization, 12 March 1968.
- D. Directive from the Chief, Combat Research and Evaluation Organization, dated 16 May 1968.

II. OBJECTIVE

To conduct an anthropometric survey of the Imperial Iranian Armed Forces that will provide a body of comprehensive data which will serve the immediate purpose of developing standard sizes for ready-made uniforms and which will also be available for any human engineering studies that may be undertaken in the future.

III. BACKGROUND

The officers and NCOs of the Imperial Iranian Army do not receive ready-made uniforms issued by the Quartermaster Department; the uniforms manufactured and stocked by the Quartermaster Department are provided only to private soldiers. It was decided that provision of ready-made uniforms to officers and NCOs should be made contingent upon the establishing of a standard for uniform sizes, which is essential to a program of designing, manufacturing, and distributing individual clothing. There is not at present any such standard in the Imperial Iranian Army.

The experience of other countries indicates that an anthropometric survey of the armed forces provides the necessary data base for such a program. These surveys customarily comprise a greater number and variety of body measurements than those that are required only for the determination of standard uniform sizes; however, these data have many other applications in human engineering and can be included in an anthropometric survey with little additional effort.

In response to the request of the Vice Chief, Supreme Commander's Staff, the Advisory Department arranged to have the Research Triangle Institute bring a consultant to Iran to make a preliminary study of an anthropometric survey of the Imperial Iranian Armed Forces to be carried out by the Combat Research and Evaluation Organization. The consultant, Mr. Walter A. Hendricks, Senior Statistician of the Research Triangle Institute, arrived in Tehran March 29, 1968. Mr. Hendricks surveyed the available literature on the subject, gathered pertinent data on the composition of the Imperial Iranian Armed Forces, and devised a recommended approach to the accomplishment of the project. He also outlined the support which the Research Triangle Institute was to offer to the Combat Research and Evaluation Organization to supplement its resources and thereby assure the attainment of its objective. Mr. Hendricks' report, entitled "Technical Research Plan, Anthropometric Survey of Imperial Iranian Armed Forces", is attached hereto as Appendix A.

This project was assigned to the Combat Research and Evaluation Organization and given high priority by the order of the Vice Chief, the Supreme Commander's Staff.

IV. WORK STATEMENT

TASK I. To develop a detailed research plan for accomplishing Tasks I through XVI as outlined below and submit this plan to the Chief, Combat Research and Evaluation Organization, for review and approval.

TASK II. To determine the design of the sample to be surveyed from among the three forces. This task is to be performed by Mr. Walter A. Hendricks in coordination with the Project Officer. The design is subject to review and possible modification upon recommendation of the Project Officer.

TASK III. To determine the types of data to be collected. This task is to be performed by Mr. Hendricks. His list will be carefully reviewed by the Project Officer in consultation with his colleagues to insure that no items which might be particularly pertinent in Iran have been neglected.

TASK IV. To design and print the recording form. The design is to be drafted by Mr. Hendricks. After review and approval by the Project Officer, arrangements will be made by RTI, in cooperation with the Combat Research and Evaluation Organization, to have the required number of copies printed, either in Tehran or in the United States.

TASK V. To prepare an instruction manual for the measuring team. This task is to be performed by Research Triangle Institute specialists, with assistance from the Project Officer and other Combat Research and Evaluation Organization personnel.

TASK VI. To determine the special instruments needed for anthropometric measurements and to plan for their procurement. This task is to be performed by Mr. Hendricks.

TASK VII: To determine, on the basis of the strengths of the various military installations to be visited, the exact number of personnel to be measured at each installation and the exact designation of the particular administrative units to be selected. This task will be performed by the Project Officer.

TASK VIII. To determine the composition of the measuring team and provide for recruiting its members. This will be accomplished by the Project Officer in consultation with Mr. Hendricks.

TASK IX. To communicate with the appropriate headquarters of the Imperial Iranian Armed Forces, announcing the anthropometric survey project and outlining the cooperation and support that will be required by the Combat Research and Evaluation Organization in accomplishing it.

TASK X. To schedule the visits of the measuring team to each installation and make provision for transportation and accommodations. This task will be performed by the Project Officer.

TASK XI: To brief commanders of installations to be visited and prepare the facilities that will be required by the team. This task will be performed by the Project Officer, accompanied by Major Dr. Radmanesh and an RTI analyst.

TASK XII. To train the measuring team. This will be accomplished by the Project Officer, possibly with the assistance of Major Dr. Radmanesh and of Research Triangle Institute specialists, as required.

TASK XIII. To take the measuring team to each of the selected installations and supervise the measuring and recording of measurements of all subjects in the sample. This task will be performed by the Project Officer with the assistance of Major Dr. Radmanesh and a Research Triangle Institute specialist.

TASK XIV. To determine the extent to which the preparation of the data for processing by electronic equipment can be accomplished in Tehran and the accomplishment of that part of the preparation which is found feasible. The data will then be forwarded to the Research Triangle Institute. This task will be performed by the Project Officer with the cooperation of a Research Triangle Institute analyst working with the Combat Research and Evaluation Organization.

TASK XV. To process the anthropometric data and prepare appropriate statistical tables. This task will be performed by the Research Triangle Institute in the United States.

TASK XVI. To prepare and submit the final report. This task will be performed by the Project Officer and the RTI CREO Team representative, acknowledging the assistance supplied by cooperating agencies and individuals.

V. PRINCIPAL RECOMMENDATIONS

A. To attain the objective, it is necessary that support be provided by the three forces.

B. Cooperation of the Research Triangle Institute in developing recommendations and processing the data is essential, since CREO lacks the experience and technical knowledge required.

VI. ADMINISTRATIVE CONSIDERATIONS

A. The commanders of installations where subjects are to be measured will be required to provide assistance such as facilities where measuring can be done, furniture, and personnel to assist the measuring team.

B. The project officer will be absent from Tehran on the Survey approximately sixty days and will require travel authorization for the team to visit six military installations (Ajabshir, Birjand, Kerman, Khorramabad, Bandar Pahlavi, and Khorramshahr.)

C. Since this project was assigned after the beginning of the current year, a supplemental allocation of funds to the Combat Research and Evaluation Organization will be required for the execution of the research.

APPENDIX B

Detailed Research Plan

IMPERIAL IRANIAN ARMY
COMBAT RESEARCH AND EVALUATION ORGANIZATION

Detailed Research Plan

Anthropometric Survey
of the
Imperial Iranian Armed Forces

by
Major Doctor Shajae-din Noorani

This Detailed Research Plan represents the accomplishment of Task I of the Technical Research Plan for the anthropometric survey of the Imperial Iranian Armed Forces dated August 26, 1968.

TASK II

To determine the design of the sample to be surveyed from among the three forces of the Imperial Iranian Army.

SUBTASK A. To review the literature available on anthropometric surveys of armed forces personnel carried out in other countries to acquire background information on the design of samples utilized in them. This subtask is to be performed by Mr. Walter A. Hendricks, Senior Statistician of the Research Triangle Institute.

SUBTASK B. To survey the literature available and to collect data on the ethnic, educational, linguistic, and occupational composition of the Iranian population from which the personnel of the armed forces are drawn. This subtask is to be performed by Mr. Hendricks in cooperation with officers of the Combat Research and Evaluation Organization.

SUBTASK C. To collect data on the structure of the Imperial Iranian Army and on the disposition of units in order to determine the parameters to be considered in selecting the sample. This subtask is to be performed by Mr. Hendricks.

SUBTASK D. To formulate a design of the sample to be surveyed on the basis of statistical principles applied to the data assembled under Subtasks A through C. This subtask is to be performed by Mr. Hendricks.

SUBTASK E. To review the sampling plan formulated under Subtask D from the standpoint of technical adequacy and operational practicality and recommend modifications that may be necessary or desirable. This subtask will be accomplished by the Project Officer in coordination with the RTI CREO Team representative.

SUBTASK F. To submit the design of the sample to the Chief, Combat Research and Evaluation Organization, for approval.

TASK III

To determine the types of data to be collected on each subject in the sample.

SUBTASK A. To review the literature available on anthropometric surveys of armed forces personnel carried out in other countries to acquire background information on the types of data which were found appropriate for the attainment of their objectives. This subtask is to be performed by Mr. Hendricks.

SUBTASK B. To consult available specialists who have had experience in designing and carrying out anthropometric survey plans. This subtask is to be performed by Mr. Hendricks.

SUBTASK C. To formulate the list of data to be included in the survey. This subtask is to be performed by Mr. Hendricks and carefully reviewed by the Project Officer in consultation with his colleagues to insure that items of particular pertinence in Iran have not been neglected.

SUBTASK D. To submit the list of types of data to the Chief, Combat Research and Evaluation Organization, for approval.

TASK IV

To design and print the form for recording the data to be collected on each subject in the sample.

SUBTASK A. To review the literature available on anthropometric surveys of armed forces personnel carried out in other countries and analyze the recording forms to determine features applicable to the survey in Iran. This subtask will be performed by Mr. Hendricks and the Project Officer.

SUBTASK B. To design a form for recording the data to be taken by the measuring team. This task will be performed by Mr. Hendricks, subject to review and approval by the Project Officer.

SUBTASK C. To determine the recording form printing requirements: number of pages, size of form, size of print, weight of paper, number of forms needed, and color of paper. This subtask will be performed by the Project Officer with the assistance of the Research Triangle Institute Team representative.

SUBTASK D. To submit the design of the recording form to the Chief, Combat Research and Evaluation Organization, for review and approval.

SUBTASK E. To arrange for the printing of the recording forms. This task will be performed by the Research Triangle Institute with the cooperation of the Project Officer, either in Tehran or the United States.

TASK V

To prepare an instruction manual for the measuring team.

SUBTASK A. To design the instruction manual on the basis of the data to be collected and recorded. This subtask will be performed by Mr. Hendricks with the assistance of the Project Officer and other Combat Research and Evaluation Organization personnel.

SUBTASK B. To determine the format of the instruction manual, the manner of reproducing it, and the number of copies required. This subtask will be performed by the Project Officer with the assistance of the Research Triangle Institute team representative.

SUBTASK C. To submit the draft instruction manual to the Chief, Combat Research and Evaluation Organization, for approval.

SUBTASK D. To arrange for the reproduction of the instruction manual. This subtask will be performed by the Research Triangle Institute with the cooperation of the Project Officer, either in Tehran or the United States.

TASK VI

To determine the special instruments needed for anthropometric measurements and to plan for their procurement.

SUBTASK A. To review the literature available on anthropometric surveys of armed forces personnel carried out in other countries and to consult with available specialists who have had experience in planning and executing anthropometric surveys. This subtask will be performed by Mr. Hendricks.

SUBTASK B. To determine the requirements for special instruments in this survey of the Imperial Iranian Armed Forces. This subtask will be performed by Mr. Hendricks.

SUBTASK C. To procure and ship to Iran the special instruments determined under Subtask B to be required. This subtask will be performed by the Research Triangle Institute.

TASK VII

To determine, on the basis of the strengths of the various military installations to be visited, the exact number of personnel to be measured at each installation and the exact designation of the particular administrative units to be selected.

SUBTASK A. To ascertain the number of personnel that will be stationed at each of the installations to be visited at the time of the visit of the measuring team. This subtask will be performed by the Project Officer.

SUBTASK B. To compute, based on the total number of trainees and the part of the sample to be taken from training centers, the percentage of the personnel at each training center that will be measured. This subtask will be performed by the Project Officer and the Research Triangle Institute Team representative.

SUBTASK C. To compute the exact number of subjects to be measured in each training center to be visited, specifying the number of trainees and commissioned and noncommissioned officers by rank. This subtask will be performed by the Project Officer with the assistance of the Research Triangle Institute Team representative.

SUBTASK D. To determine, on the basis of the exact number of personnel to be furnished and on the organization of each installation, the particular units that will provide the subjects for measurement. This subtask will be performed by the Project Officer.

SUBTASK E. To submit the detailed plan for designating the units and exact number of personnel to be measured in each unit to the Chief, Combat Research and Evaluation Organization, for approval.

TASK VIII.

To determine the composition of the measuring team and provide for recruiting its members.

SUBTASK A. To determine, on the basis of the technique for taking and recording the measurements, the number of personnel required to make up the measuring team and their qualifications. This subtask will be performed by the Project Officer with the assistance of Mr. Hendricks.

SUBTASK B. To determine the method of recruiting and arranging to train the measuring team members. This subtask will be performed by the Project Officer in consultation with the Research Triangle Institute Team representative.

SUBTASK C. To submit the report of the composition of the measuring team and proposed recruiting plan to the Chief, Combat Research and Evaluation Organization, for approval.

TASK IX

To communicate with the appropriate headquarters of the Imperial Iranian Armed Forces, announcing the anthropometric survey project and outlining the cooperation and support that will be required from them to accomplish it.

SUBTASK A. To determine the specific actions which will be required on the part of other headquarters of the Imperial Iranian Armed Forces. This subtask will be performed by the Project Officer.

SUBTASK B. To draft the appropriate communication informing the headquarters of the three forces of the required cooperation and support. This subtask will be performed by the Project Officer.

SUBTASK C. To submit the draft communication to the Chief, Combat Research and Evaluation Organization, for approval and transmission.

TASK X

To schedule the visits of the measuring team to each installation and make provision for transportation and accommodations.

SUBTASK A. To determine the number of days that will be required at each specific installation for the accomplishment of the measuring. This subtask will be performed by the Project Officer.

SUBTASK B. To determine the means of travel for the measuring team to visit each specific installation, the amount of travel time required for each trip, the accommodations required en route to each installation, and the costs involved. This subtask will be performed by the Project Officer with the assistance of the Administrative Division.

SUBTASK C. To formulate the schedule of visits by the measuring team to each installation, specifying dates, times of arrival and departure, means of transportation, stops en route, plan for scheduling groups of personnel, and accommodations required for team members. This subtask will be performed by the Project Officer.

SUBTASK D. To submit the schedule to the Chief, Combat Research and Evaluation Organization, for approval.

SUBTASK E. To inform the appropriate headquarters of the schedule of visits.

TASK XI

To brief commanders of installations to be visited and prepare the facilities that will be required by the team. This task will be performed by the Project Officer, accompanied by Major Dr. Radmanesh and the Research Triangle Institute Team representative.

SUBTASK A. To design a format for briefing the commanders of the installations selected for the survey team visits. This will include a description of the objectives and background of the project, a description of the cooperation required from the installation commander in the measuring phase, and possibly a demonstration of the measuring procedure. If feasible, it will include preliminary instruction of the data recording personnel. This subtask will be performed by the Project Officer.

SUBTASK B. To draw up a list of actions required of each installation commander to assist the measuring team in its mission. This will include the provision of data recording personnel, facilities for measuring, transportation of personnel and equipment where necessary, and accommodations for the team members. This subtask will be performed by the Project Officer.

SUBTASK C. To schedule the visits to the installation commanders for briefing and making preliminary preparations of the measuring sites. This subtask will be performed by the Project Officer.

SUBTASK D. To submit the briefing plan and schedule of visits to the Chief, Combat Research and Evaluation Organization, for approval.

SUBTASK E. To make the necessary travel arrangements for the Project Officer, Major Dr. Radmanesh, and the Research Triangle Institute Team representative. This subtask will be performed by the Project Officer.

SUBTASK F. To inform the appropriate headquarters of the schedule for the briefings. This subtask will be performed by the Project Officer.

SUBTASK G. To carry out the briefings according to the approved schedule.

SUBTASK H. To report to the Chief, Combat Research and Evaluation Organization, the results of the mission.

TASK XII

To train the measuring team.

SUBTASK A. To outline the plan of instruction to be followed in training the members of the measuring team. This will include an introduction to the background and objectives of the survey, study of the instruction manual, familiarization with the recording form and anthropometric measuring instruments, and practice in measuring subjects. The outline will specify the individuals who will accomplish each phase of the instruction and the time allotted for each phase. This subtask will be performed by the Project Officer with the assistance of Major Dr. Radmanesh and the Research Triangle Institute Team representative.

SUBTASK B. To schedule the training session and make arrangements for any necessary transportation and billeting of the members of the training group. This subtask will be performed by the Project Officer.

SUBTASK C. To submit the plan of instruction and schedule to the Chief, Combat Research and Evaluation Organization, for approval.

SUBTASK D. To carry out the course of instruction, evaluating the capabilities of the members of the training group in order to choose the best-qualified man to be team leader and to eliminate from the group any who prove to be unsuited to the mission. This subtask will be performed by the Project Officer with the assistance of Major Dr. Radmanesh and the Research Triangle Institute Team representative.

SUBTASK E. To report the accomplishment of the training, listing the personnel who qualify as team members and their functions, if specified. This subtask will be performed by the Project Officer.

TASK XIII

To take the measuring team to each of the selected installations and supervise the measuring and recording of measurements of all subjects in the sample. This task will be performed by the Project Officer with the assistance of Major Dr. Radmanesh and a Research Triangle Institute specialist. The subtasks to be accomplished on each visit of the survey group are outlined below:

SUBTASK A. To assemble the members of the survey group at the point of departure (Combat Research and Evaluation Organization Office, railway station, airport, bus station, billets, etc.) and determine that all are present, assure that the anthropometric measuring instruments and equipment are on hand, verify that each measuring team member is properly outfitted for the travel and duty involved, make certain that transportation is available, supervise the group while traveling, report the group to the installation commander upon arrival, provide for the members of the group to check into their assigned quarters, and issue orders to the group specifying the time and place to report for duty. This task will be performed by the Project Officer.

SUBTASK B. To make all preparations for organizing the measuring effort, such as arranging the measuring stations, instructing the data recording personnel, verifying the schedule for bringing subjects to the measuring site, and issuing all necessary instructions to ensure orderly and efficient performance of the work. This subtask will be performed by the Project Officer.

SUBTASK C. To supervise all data-measuring operations, checking for accuracy and thoroughness of performance. This subtask will be performed by the Project Officer, Dr. Radmanesh, and the Research Triangle Institute specialist.

SUBTASK D. To collect all recorded data at the end of each work day and provide for the safekeeping of the records, instruments, and equipment. This subtask will be supervised by the Project Officer.

SUBTASK E. To assemble the members of the measuring team after each work day to offer suggestions, praise, criticism, and recommendations related to their performance and to issue instructions for the following day. This subtask will be performed by the Project Officer.

SUBTASK F. Upon completion of all measuring at the installations, to call upon the installation commander to express thanks for his cooperation and assistance and for the cooperation and assistance of the personnel under his command, to assure that all administrative matters are completed for departure from the installation, and to bid farewell. This subtask will be performed by the Project Officer, accompanied by appropriate members of the group.

SUBTASK G. To report by telegraphic means to the Chief, Combat Research and Evaluation Organization, the completion of the visit and any pertinent information about the survey group. The report should include the time of departure from the installation and expected time of arrival at the next destination. This subtask will be performed by the Project Officer.

TASK XIV

To determine the extent to which the preparation of the data for processing by electronic equipment can be accomplished in Tehran and the accomplishment of that part of the preparation which is found feasible, then to forward the measurement data to the Research Triangle Institute for processing and analysis.

SUBTASK A. To determine the feasibility of entering the data on punched cards and subsequently transferring them from punched cards to magnetic tape in Tehran for forwarding to the Research Triangle Institute. This subtask will be performed by the Research Triangle Institute Team representative with the cooperation of the Project Officer.

SUBTASK B. To report to the Chief, Combat Research and Evaluation Organization, and to the Research Triangle Institute in North Carolina the method selected for preparing the data for transmission to the Research Triangle Institute. This subtask will be performed by the Project Officer and the Research Triangle Institute Team representative.

SUBTASK C. To prepare and transmit the data to the Research Triangle Institute by the best practicable means. This subtask will be performed by the Research Triangle Institute Team representative.

TASK XV.

To process the anthropometric data and prepare appropriate statistical tables.

This entire task is to be the responsibility of the Research Triangle Institute in North Carolina.

TASK XVI.

To prepare and submit the final report.

This task will be performed by the Project Officer and the Research Triangle Institute Team representative, acknowledging the assistance supplied by cooperating agencies and individuals.

APPENDIX C

Preliminary Data Collection Report

ABOUT THE ANTHROPOMETRIC SURVEY

1. Introduction.

For the purpose of collecting complete data on body dimensions of the officers, NCOs, and subjects of the IIA to make standard sizes of ready-made uniforms and also for the use of the data collected in human engineering, the Anthropometric Survey Group under the supervision of Dr. Shoja-eddin Noorani, as Project Officer, Mr. Clarence Dillard, RTI Advisor, three physicians and seventeen NCOs from the Quartermaster and Medical Departments of the IIA Ground Forces have finished the mentioned project with the designated units in the time-phase scheduled.

2. Manner of Execution of the Project.

According to the attached detailed appendix, 9,417 persons have been measured in the Imperial Iranian Armed Forces.

Officers	421
NCOs	3,265
Trainees	5,731

Measurement of officers has been done up to the level of colonel, inclusive, NCOs, and privates as follows:

A. Imperial Iranian Ground Forces. A total of 7,884 men in the training centers and other selected units have been measured.

(1) Conscript Training Centers--total 6,590 subjects

	OFFICERS	NCOs	TRAINEES	TOTAL
Tehran Cadre Training Center, No. 301	31	93	1,018	1,142
Khorramabad Training Center, No. 302	76	171	1,403	1,650

	OFFICERS	NCOS	TRAINEES	TOTAL
Ajabshir Training Center, No. 303	42	176	1,450	1,668
Birjand Training Center, No. 304	39	110	1,058	1,207
Kerman Training Center, No. 305	32	89	802	923

(2) Selected units stationed in Tehran--total 1,294 subjects

	OFFICERS	NCOS AND PRIVATES	TOTAL
Central Combat Support Group	33	546	579
Military Academy	35	347	382
2nd Pahlavi Brigade	6	161	167
Special Airborne Unit	7	159	166

B. Imperial Iranian Air Force. A total of 790 men in Doshan Tappeh and the 50th Transportation Station in Shiraz have been measured.

OFFICERS	NCOS AND PRIVATES	TOTAL
73	717	790

C. Imperial Iranian Navy. A total of 743 men of the First Navy District of Mazandaran (Bandar-Pahlavi) and the Second Fleet at the Persian and Oman Gulf have been measured.

	OFFICERS	NCOS AND PRIVATES	TOTAL
Bandar-Pahlavi	39	252	291
Khorramshahr	8	444	452

The Navy installation at Khorramshahr could not send more officers for measuring as they were engaged in maneuvers.

The List of IIA Personnel who have been measured by the Anthropometric Group.

Name of the Units	No. of Officers				No. of NCOs & Students				No. of Trainees at the Training Centers				Total No. planned	Total No. measured	Total short-age No.	Total extra No.	Extra Nos. measured which were not planned
	open on	planned	measured	short-age	extra	planned	measured	short-age	extra	planned	measured	short-age					
Tehran, 301 Cadre Training Center	40	31	9	-	-	100	93	7	-	990	1018	-	1130	1142	16	28	12
Birjand, 304 Training Center	40	39	1	-	-	100	110	-	10	1000	1058	-	1140	1207	1	68	68
II Navy Force	50	47	3	-	-	600	696	-	96	-	-	-	650	743	3	96	93
Military Academy	13	35	-	22	-	320	347	-	27	-	-	-	333	382	-	49	49
Ajabshir, 303 Training Center	56	42	14	-	-	140	176	-	36	1400	1450	-	1596	1668	14	86	72
II Air Force	50	73	-	23	-	700	717	-	17	-	-	-	750	790	-	40	40
Kerman, 305 Training Center	32	32	-	-	-	80	89	-	9	800	802	-	912	923	-	11	11
Combat Support Training Group	19	33	-	14	-	480	546	-	66	-	-	-	499	579	-	80	80
Khorramabad, 302 Training Center	56	76	-	20	-	140	171	-	31	1400	1403	-	1596	1650	-	54	54
2d Pahlavi Brigade	6	6	-	-	-	160	161	-	1	-	-	-	166	167	-	1	1
Special Airborne Unit	6	7	-	1	-	160	159	1	-	-	-	-	166	166	1	1	-
TOTAL	368	421	27	80	2980	3265	8	293	5590	5751	-	141	8938	9417	35	514	479

3. Time-Phasing for Execution of the Project.

The program was executed according to the designated time-phasing without any delay. It started on November 20, 1968, and was completed on March 20, 1969. After Now Ruz holidays of this year, the team spent two days in preparing its report. On March 13, 1969, it was reported to the Ground Forces that the officers and NCOs who were assigned to CREO have finished their missions.

4. Manner of Operations of the Anthropometric Group.

According to the plan, there were ten stations at each installation to complete the recording form for each subject. Seventy-four different measurements with various kinds of special instruments have been taken from the selected persons. After completion of the forms, they were handed to Mr. Clarence Dillard, the advisor concerned. In accordance with arrangements made by RTI, the completed forms will be sent to the IIA Electronic Computer Center for recording on punched cards and transfer to magnetic tape. The tape will then be sent to the U.S.A. for analysis by specialists. The result of the analysis related to ready-made standard uniforms will be forwarded to the IIA. It should be noted that the team by its constant effort not only finished its mission according to the time-phased schedule, but also measured a total of 479 persons more than the estimate of personnel to be measured in order to obtain a better result for ready-made standard uniforms in the IIA. This included 53 officers, 285 NCOs, and 141 trainees.

5. Results.

The Anthropometric Survey has been finished by CREO in the IIA.

The completed forms have been sent to the IIA J-7, Electronic Center, by RTI to be punched and recorded on magnetic tape.

The advisors concerned are waiting now to receive the tape and send it to the United States for analysis and to transmit the results to the IIA.

Further actions will be taken by CREO and the final report will then be forwarded.

Chief of CREO

Brigadier General Sodaify

APPENDIX D

Data Collection Instruction Manual

نیـروهای مسلح شاهنشاهی ایران

سازمان تحقیقات و ارزیابی رزمی

پـرسـی اندازه گیری اندام نیروهای مسلح شاهنشاهی

دستورالعمل چگونگی جمع آوری اطلاعات

سرکرد دکتر شجاع الدین نورانی

والترف هندریکس

کلارنس ن دیلارد

(۱۳۴۷)

IMPERIAL IRANIAN ARMED FORCES

COMBAT RESEARCH AND EVALUATION ORGANIZATION

ANTHROPOMETRIC SURVEY OF IMPERIAL IRANIAN ARMED FORCES

DATA COLLECTION INSTRUCTION MANUAL

Major Dr. Shoja-Eddin Noorani

Walter F. Hendricks

Clarence N. Dillard, Jr.

(1968-1969)

فهرست مندرجات

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۲۳	جایگاه ۷	Station 7	23
۲۵	جایگاه ۸	Station 8	25
۲۷	جایگاه ۹	Station 9	27
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الف - ۱	ضمیمه الف : چارتهای توجیهی	Appendix A: Briefing Charts	A-1
ب - ۱	ضمیمه ب : فرم ثبت اطلاعات	Appendix B: Data Recording Form	B-1

بررسی اندازه گیری اندام نیروهای سلح شاهنشاهی

دستورالعمل چگونگی جمع آوری اطلاعات

مقدمه

منظور از بررسی اندازه گیری اندام گردآوری اطلاعات درباره ابعاد بدن و اطلاعات وابسته به آن از نمونه های پرسنل نیروهای مسلح شاهنشاهی است . نتایج این بررسی در تعیین اندازه های استاندارد یونیفرمهای آماده شده و همچنین در تعیین اقسام تجهیزات مختلف ، و سایر منظورهای دیگر نیاز بدانشتن مشخصات فیزیکی پرسنل ارتش شاهنشاهی دارد مورد استفاده قرار خواهد گرفت . کوشش فراوان در تهیه طرح جمع آوری اطلاعات آنچنان بعمل آمده تا با سهولت و سهولت بررسی هائیکه در این مورد در سایر کشورها انجام گردیده قابل مقایسه بوده باشد .

اگرچه مشکل بخصوصی در مورد جمع آوری اینگونه اطلاعات موجود نیست ، ولی ایجاب میکند که مطابق با روش اصولی و متدیک هر مرحله طرح ریزی شده و بر طبق تعاریف و آموزش های داده شده اندازه های مختلف بدرستی و با دقت گرفته شود . بنابراین تشریح کلی طرح و جزئیات تعالیم بمنظور گفتگو و ثبت جمع آوری اطلاعات و سوابق در این آئین نامه دستور جمع آوری اطلاعات ارائه میگردد .

شرح کلی

تعیین نمونه ای که اطلاعات این بررسی را تهیه مینماید اندازه هائی است که از پرسنل یگانهای رده های گروهان در هر یک از تاسیسات نظامی نیروهای مسلح شاهنشاهی گرفته میشود . اکثر اشخاصی که مورد اندازه گیری قرار خواهد گرفت سربازان تحت آموزش در چهار مرکز آموزش و وظیفه نیروی زمینی و همچنین مرکز ۳۰۱ کادر تهران خواهند بود . بقیه افراد از سایر یگانهای نیروهای سه گانه زمینی ، هوایی و دریائی تامین خواهد گردید .

ANTHROPOMETRIC SURVEY OF IMPERIAL IRANIAN ARMED FORCES

DATA COLLECTION INSTRUCTION MANUAL

Introduction

The purpose of this Anthropometric Survey is to obtain data on body dimensions and related information from a sample of personnel of the Imperial Iranian Armed Forces. The results of the survey will be used in determining standard sizes of ready-made uniforms, in designing various items of equipment, and for other purposes that require detailed knowledge of the physical characteristics of Iranian military personnel. Every effort has been made to design a data collection plan comparable to those for surveys of this kind which have been carried out in other countries.

Although there is nothing particularly difficult about collecting data of this kind, it is imperative that every step be planned and executed in a thorough and methodical manner and that the various measurements be made accurately according to prescribed definitions and instructions. Therefore, a general description of the plan and detailed instructions for taking and recording both the anthropometric data and background information are presented in this Data Collection Instruction Manual.

General Description

The design of the sample which is to provide the data for this study calls for measurements to be taken of the personnel of company-sized units in various installations of the Imperial Armed Forces. The majority of the subjects will be trainees in the four regional Ground Forces training centers and the cadre training center in Tehran. The remainder of the sample will be drawn from regular Ground Force units, the Air Force, and the Navy.

جمع‌آوری اطلاعات توسط يك گروه اندازه‌گیری اندام متشكل از
 تیم اندازه‌گیری و انصران بهداشتی تحت سرپرستی انصر پروژه
 انجام خواهد گرفت. گروه اندازه‌گیری اندام طی مسافرت‌های
 چهارماهه به یگان‌های منتخبه اجرای طرح را انجام خواهند داد.
 قبل از اجرای طرح، فرماندهان هر يك از یگان‌های منتخبه در مورد
 هدف و روش اجرای طرح و همچنین چگونگی همکاری‌های مورد
 نیاز گروه از یگان‌های مورد نظر توسط انصر پروژه توجیه خواهند شد.
 جدول‌های توجیه شده بعنوان ضمیمه الف به پیوست میباشد. در این
 ملاقات‌های توجیهی انصر پروژه استعداد تقریبی هر یگان را برای
 تعیین تعداد افراد جهت اندازه‌گیری اندام معین خواهند نمود.
 و همچنین تسهیلات لازم را برای تیم اندازه‌گیری در هر سادگان
 بررسی خواهد کرد.

پس از این ملاقات‌های توجیهی و براساس اطلاعاتيكه هر يك از
 فرماندهان یگان‌ها در اختیار انصر پروژه قرار میدهند نامبرده
 برنامه بازدید های گروه اندازه‌گیری اندام را تنظیم و به فرماندهان
 مربوطه تسلیم خواهد نمود. دو هفته قبل از شروع برنامه انصر پروژه
 افراد گروه اندازه‌گیری و انصران بهداشتی را جمع‌آوری و در مورد وظایف
 آنها در این پروژه بآنها آموزش خواهد داد.

اقداماتيكه در بازدید های جمع‌آوری اطلاعات بایستی تعقیب شود
 در زیر خلاصه میگردد:

بمحض ورود تیم اندازه‌گیری به هر يك از مراکز نظامی انصر پروژه
 گزارش ورود تیم را به فرمانده پادگان خواهد داد و اوقاتيكه
 در مورد برقراری تسهیلات و كمك‌های لازم برای عملیات گروه اندازه‌گیری
 در ملاقات‌های توجیهی خود از فرمانده خواسته بود محرز خواهد نمود.
 در هر بازدید روز اول بمنظور تهیه اطاق و جمع‌آوری و مرتب کردن
 وسائل لازم و آموزش افراد كمکی كه توسط فرمانده پادگان در اختیار
 گروه گذارده شده صرف خواهد شد و در روز دوم عملیات اندازه‌گیری
 شروع خواهد گردید.

برآورد شده كه میتوان در هر ساعت ۲۵ نفر را اندازه‌گیری نمود.

The data collection will be accomplished by an Anthropometric Survey Group composed of a measuring team and medical officers under the supervision of the Project Officer. The Group will carry out a series of visits to designated military installations over a period of approximately four months. Prior to fixing the schedule of these visits, the Project Officer will make a preliminary personal visit to brief the commander of each installation regarding the purpose of the survey, the manner in which it will be conducted, the assistance that will be required from the commander, and the tentative schedule. (The briefing charts are attached as Appendix A). During the briefing visits, the Project Officer will ascertain the strength of the garrison approximately in order to determine the number of subjects it should furnish in accordance with the design of the sample. He will also survey the facilities to be made available at each installation to the measuring team. Following the briefing visits, on the basis of the information provided by the installation commanders, he will fix the schedule for the data collection visits and submit it to the proper headquarters. Two weeks before the beginning of the schedule, he will assemble the measuring team and medical officers and instruct them in their duties.

The procedures to be followed in carrying out the data collection visits are outlined below:

Upon arrival of the Anthropometric Survey Group at each installation, the Project Officer will report to the commander of the garrison and confirm the arrangements made during the briefing visit for necessary assistance in organizing the facilities for measurement operations. The first day of each visit will be devoted to preparing rooms, assembling and arranging required furniture, and instructing support personnel provided by the garrison commander. On the second day, measuring operations will begin.

It is estimated that 25 subjects can be

measured in one hour. On the basis of a six-hour day, it should be possible to measure 150 subjects a day. Garrison commanders will be requested to make available approximately this number of subjects daily. To minimize waiting time at the measuring site, it will be requested that subjects report to the Project Officer in successive groups of about 50. As each group arrives, the measuring procedures will be explained so that they can readily understand and follow the instructions of the measuring team personnel. They will then be told to remove all their clothing except undershorts and move one by one to the first measuring station.

Measurement data will be recorded by support personnel of the host installation on Data Recording Forms described below.

After each subject has been processed, he will be directed to return to the point where he left his clothing. There he will dress and rejoin his group.

Anthropometric Survey Group

The Anthropometric Survey Group will consist basically of the Project Officer, three Medical Officers, and a measuring team of ten noncommissioned officers. Five noncommissioned officers will be included as reserve members of the measuring team, and one R.T.I. analyst working with J-8, ARMISH/MAAG, will accompany the Group.

The Anthropometric Survey Group will assemble at the Combat Research and Evaluation Organisation two weeks prior to the beginning of data collection visits. The Project Officer will train the medical officers and members of the measuring team in their duties, inform them of the schedule, and supervise arrangements for travel.

The duties of the Medical Officers will include administering tests for normal vision and color perception and supervising measuring team members and

بر اساس ۶ ساعت کارامکان دارد روزانه تعداد ۱۵۰ نفر را اندازه گیری نمود. از فرماندهان پانها تقاضا خواهد شد که تقریباً این تعداد را روزانه آماده نمایند. برای تقلیل مدت زمانیکه باید در محل اندازه گیری منتظر بمانند از آنها خواسته خواهد شد که خود را متوالیا در گروههای تقریباً ۵۰ نفری با افسر پروژه معرفی نمایند. بهمنز و رود هر گروه طرز اندازه گیری برای آنها شرح داده خواهد شد تا با آسانی بتوانند دستورات افراد گروه اندازه گیری را فهمیده و اجرا نمایند. سپس پانها گفته خواهد شد که کلیه البسه خود غیر از زیر شلوار را از تن بپوشانند و یک بیک بطرف اولین جایگاه اندازه گیری بروند. اطلاعات اندازه گیری شده توسط افراد کمک هر پادگان (نویسنده ها) در فرمهای جمع آوری اطلاعات که در زیر شرح داده میشود ثبت خواهد گردید.

پس از اینکه مراحل اندازه گیری هر سرباز عمل شد و او راه طرف محلی که لباسهایش را ترک کرده است راهنمایی خواهند کرد تا در آنجا لباسهایش را بپوشید و مجدداً بگروه مربوطه اش ملحق گردد.

گروه اندازه گیری اندام

گروه اندازه گیری اندام بطور کلی شامل افسر پروژه و سه افسر بهداری و یک تیم اندازه گیری ده نفری درجه دار خواهد بود. ۵ نفر درجه دار بعنوان اعضای ذخیره و یک نفر آنالست از موسسه تحقیقاتی ترابنکل که با اداره هشتم مستشاری کار میکند همراه این گروه خواهند بود.

گروه اندازه گیری اندام دو هفته قبل از شروع مسافرتشان در سازمان تحقیقات و ارزیابی رزی حضور بهم خواهند رساند. افسر پروژه وظایف افسران بهداری و اعضای تیم اندازه گیری را پانها آموزش خواهد داد، و از جریان این برنامه آنها را آگاه خواهد ساخت، و بر تهیه مقدمات مسافرت نظارت خواهد نمود.

وظایف افسران بهداری شامل اجرای آزمایشات دید طبیعی افراد و قوه تشخیص رنگ آنها و نظارت بر کار اعضای گروه اندازه گیری و کمک با افراد نویسنده که مأمور ثبت اطلاعات هستند خواهد بود.

علاوه بر این آنها افسر پروژه را در آگاه کردن افراد قبل از اندازه گیری و بررسی فرمها تکمیل شده و تسریع لازم در عملیات اندازه گیری کمک خواهند نمود .

اعضای گروه اندازه گیری مسئول گرفتن اندازه هر سرباز با وسائیل مختص بخود میباشند و بایستی اندازه گرفته شده را برای ثبت در فرمهای مخصوص با صدای بلند با اطلاع نویسنده ها که مسئول ثبت ارقام در فرمها هستند برسانند . در اولین روز اندازه گیری، نویسنده ها که مسئول ثبت اطلاعات هستند با اعضای گروه اندازه گیری که باید در جایگاههای مربوط بایکدیگر همکاری نمایند بهم معرفی میشوند . اعضای گروه اندازه گیری طرز نوشتن فرمها را برای افراد نویسنده توضیح داده و بآنها فرصت میدهند تا با طرز نوشتن این فرمها آشنا شوند . اعضای گروه اندازه گیری بایستی اطمینان حاصل نمایند که افراد نویسنده ارقام را در مرحلهای مناسب بطور خوانا و با دقت در فرم مزبور ثبت نمایند . آنها همچنین مسئول نگهداری و نظافت وسائیل اندازه گیری که بآنها تحویل گردیده میباشند .

عملیات گروه اندازه گیری

هر یک از اعضای گروه اندازه گیری بیکی از ۱۰ جایگاهیکه شماره گذاری گردیده است گمارده خواهند شد و در هر جایگاه اندازه های بخصوصی در نظر گرفته شده است . (تعداد و نوع این اندازه ها بر اساس نوع وسیله مورد لزوم جهت اندازه گیری در هر جایگاه ، نوع اندازه های خواسته شده ، مدت زمان مورد نیاز جهت اندازه گیری در نظر گرفته شده است) .

شایان توجه است که از نظر زمان اشخاص بطور مساوی در هر جایگاه صرف وقت نمایند تا در دشواری آنها بصورت مداوم صورت پذیرد . همچنین حائز اهمیت است که مسئولین جایگاهها تغییرات زیادی در طرز کار خود ندهند مگر اینکه تغییرات مختصری در وسیله اندازه گیری و طرز حرکات خود بمنظور اندازه گیری قسمتهای مختلف بدن و یا طرز قرار گرفتن و نشستن شخص مورد آزمایش .

متصدی جایگاه شماره ۱ که اکثر برای سؤال کردن از اشخاص در

support personnel. In addition, they will assist the Project Officer in instructing subjects prior to measuring, in checking completed data recording forms, and in expediting measuring operations as required.

The members of the measuring team will be responsible for taking dimensions of each subject with appropriate anthropometric instruments and calling out the numbers to the support personnel who serve as data recorders. On the first day of the data collection visit, the data recorders will be introduced to the measuring team members to whose stations they are assigned. The measuring team members will explain procedures and give recorders an opportunity to become familiar with the Data Recording Form. They will ensure that the data recorders enter these figures in the proper spaces of the data recording forms legibly and accurately. They will also be responsible for care and cleaning of the anthropometric instruments issued to them.

Measuring Team Operations

Each member of the measuring team will be assigned to one of ten numbered stations. At each station, a specific item will be covered. The number and kind of these items have been determined on the basis of the kind of instrument required, the kind of measurement information required, and the time required to take the measurement. To move subjects through the various stations in an uninterrupted flow, it is important that the time each subject spends at each of the ten stations be about the same. It is also important that the team member manning each station not be required to make more than a few, if any, changes in the instrument he must use, the motions he must perform in taking measurements, or the position he has the subject assume.

The measuring team member who mans

نظر گرفته شده است. شخصاً ثبت اطلاعات مربوط به خود را میسر دارد. میباید زیرا چنانچه به ۹ نفر دیگر که کارشان اندازه گیری بدنی است نوشتن اندازه ها نیز محول گردد بخوبی از عهده اینکار برخواهند آمد. لذا نویسندگانی که از طرف هر یک از این گروه کذاشته شده اند پس از توجیه در اختیار جایگاههای شماره ۱ تا ۱۰ قرار خواهند گرفت تا ارقام اندازه گیری را که توسط اعضای گروه با صدای بلند اعلام میگردد ثبت نمایند.

مسئول جایگاه شماره ۱ عهده دار سرپرستی نیز خواهند بود و چنانچه در جریان فظایات اندازه گیری افراد گروه با مشکلی برخورد نمودند برای راهنمایی و کمک فوراً با افسر پروژه و افسران بهداشتی مراجعه خواهند نمود.

نسخه ثبت اطلاعات

نسخه ثبت اطلاعات (ضمیمه ب را ملاحظه نمائید) به ده قسمت مطابق ۱۰ جایگاه اندازه گیری تقسیم شده است. روش ثبت اطلاعات در جایگاه شماره یک که بطور کلی اطلاعات مربوط به سوابق شخص میباشد بابت اندازه های گرفته شده در جایگاههای ۱ تا ۱۰ کاملاً فرق دارد.

برای جایگاه شماره یک در فرم محلتهائی تهیه شده که پاسخ ها و مشاهدات مقتضی برای شماره های ۱ و ۸ و ۹ و ۱۰ و ۱۱ و ۱۲ و ۱۳ و ۱۴ و ۱۵ و ۱۶ و ۱۸ را علامت گذاری نمود (بجز شماره ۱۸ که وزن میباشد و به کیلوگرم ثبت میگردد). این موضوع سبب شده که فرم قدری بزرگتر شود ولی در عوض دارای چندین مزیت میباشد. اولاً در هنگام نوشتن جواب در وقت صرفه جویی میشود. ثانیاً احتیاجی به ترجمه و شماره کد نیست چون شماره کد کارتهای سوراخ شده (کارتهای مخصوص ماشینهای آی - بی - ام) در کنار محل علامت گذاری ظاهر شده اند.

هر جا جواب بایستی در محل "سایر" ثبت شود جابرای کسب اطلاعات دقیق معین شده در صورتیکه شماره کد بدون تغییر باقی میماند.

زیر شماره ۲ یک سری مربعهای پنج تایی برای نوشتن شماره ردیف

Station 1 is engaged mostly in asking questions of the subject. For that reason, he serves as his own data recorder. Since the other nine team members are engaged in making physical measurements, they could not perform efficiently if they were required also to record the measurements. Therefore, data recorders from among the support personnel provided by the installation being surveyed will be assigned to Stations 2 through 10 to record the measurement figures as they are called out by the measurer.

The team member who mans Station 1 will also serve as Team Leader. During measuring operations, team personnel will promptly call upon the Project Officer and medical officers for guidance and assistance whenever any problem arises.

Data Recording Form

The Data Recording Form (see Appendix B) is divided into ten sections, corresponding to the ten measuring stations. The procedure of recording the information elicited at Station 1, which is almost entirely background data, differs from that in recording measurements taken at Stations 2 through 10.

Under Station 1, the form provides spaces for check marks to indicate appropriate responses or observations for items Nos. 1, 8, 9, 10, 11, 13, 14, 16, 17, and 18 (except for "Weight" under item No. 18, which is recorded in kilograms). This makes the form a bit longer, but it has several advantages. First, it saves time in recording answers. Second, it eliminates the need for translation and coding, since the punched card code appears beside the space for the check mark.

Whenever a response must be recorded as "Other", a line is provided for the exact information obtained, although the punched card code remains unchanged.

Under item No. 2, a block of five

پیش‌بینی شده است بهر صورت در نظر است برای بهتر خواندن این ارقام آنها را به وسیله ماشین شماره زنی روی خطی که بالای این مربعها میباشد قرار دهند. در برابر شماره ۳ خطی برای نوشتن نام سرباز بر روی آن در نظر گرفته شده است. در مقابل شماره های ۱ و ۵ و ۶ و ۷ و ۱۲ و ۱۵ و وزن که تحت شماره ۱۸ ذکر شده مربعهایی برای نوشتن ارقام بدست آمده پیش‌بینی شده است. در برابر ۹ جایگاه باقیمانده یعنی از شماره ۲ تا شماره ۱۰ هر اندازه گیری در ردیفهای چهارخانه ای ثبت میگردد. کلیه اندازه‌ها در این ۹ جایگاه بحسب میلیمتر میباشند. هر رقمی که ثبت میشود باید در محل مخصوص خودش نوشته شود. چنانچه لازم باشد کلیه ستونها پر شوند در طرف چپ صفر اضافه میگردد. اگرچه فرم ثبت اطلاعات طوری طرح شده که شماره کد بررسی محلها را بتوان با شماره ردیف فرمهایکی نمود تا شماره واحدی تشکیل شود ولی این عمل در این بررسی مورد استفاده قرار نخواهد گرفت. تمام فرمهایس از پایان اندازه گیری به ترتیب از شماره (۱) نمره گذاری خواهد شد.

دستورات جز: بجز*

جایگاه ۱

۱- تعیین محل: در برابر نام محل که اندازه گیری در آن انجام میگردد علامت بگذارید.

۲- شماره ردیف فرم: شماره ردیف فرم را با ماشین شماره زنی بلافاصله روی خطی که بالای مربعها قرار دارد بنویسید.

۳- نام شخص: نام کامل شخص مورد آزمایش را در فرم بنویسید (نام و نام فامیل)

۴- شماره ردیف نظامی: چنانچه شخص شماره ردیف نظامی خود را نمیداند این قسمت را خالی بگذارید.

۵- سن: سن شخص مورد آزمایش را بطور دقیق به سال بنویسید.

۶- برادرخواهر: چهار سؤال زیر را از شخص مورد آزمایش بپرسید. چند برادر بزرگتر دارید؟

* ارقام فارسی نیز مانند ارقام انگلیسی از چپ براست نوشته میشوند.

squares is provided for writing in the serial number of the form. However, it is planned to use a number stamping machine and to place it on the line above the squares for legibility. Under item No. 3, a line is provided for the name of the subject.

Under items Nos. 4, 5, 6, 7, 12, and 15, and "Weight" under item No. 18, squares are provided for writing the numbers obtained.

Under the remaining nine stations, 2 through 10, each measurement is recorded in blocks of four squares. All values are in millimeters. Each digit of the numbers recorded will be written in the proper square. Zeroes will be added to the left if required to fill all columns.* Although the Data Recording Form is designed so that the code number of the survey sites can be combined with the serial numbers of the forms to form a unique number, this device will not be utilized in this survey. All forms in the entire survey will be numbered consecutively from "1".

Detailed Instructions

Station 1

1. Location of Unit: Place a check mark beside the name of the place where the measuring site is located.
2. Serial Number of Form: Stamp the serial number with the numbering machine on the line immediately above the squares.
3. Name of Subject: Enter full name of subject.
4. Military Serial Number: If unknown, leave this item blank.
5. Age: Record the age of the subject at his last birthday, in years.
6. Siblings: Ask the subject the following four questions:
"How many older brothers do you have?"

* Farsi numbers are written from left to right in the same manner as English numbers.

چند برادر کوچکتر دارید ؟

چند خواهر بزرگتر دارید ؟

چند خواهر کوچکتر دارید ؟

هرحاکه پاسخ منفی بود صفر بگذارید .

۷- وضعیت ازدواج : از شخص مورد آزمایش سئوالات زیر را

پنمائید .

آیا همسر دارید ؟ چنانچه پاسخ مثبت باشد بهرصد چندتا

همسر دارد و تعداد گفته شده را یادداشت کنید .

چنانچه پاسخ منفی بود درمحل آن صفر بگذارید .

آیا تاکنون متارکه کرده اید ؟ چنانچه پاسخ مثبت باشد بهرصد

چند بار و تعداد دفعات را یادداشت نمائید و چنانچه پاسخ

منفی بود درمحل جواب صفر قرار دهید .

۸- محل تولد : از شخص مورد آزمایش سئوال کنید در کجا متولد شده

سپس در مربع مربوط باستانداری و فرمانداری که محل تولد شخص

را مشخص میکند علامت بگذارید . چنانچه شخص منـ

در ایران تولد نیافته زیر کلمه خارج خط بکشید و اسم کشور که

نامبرده در آنجا متولد شده یادداشت نمائید .

۹- محل اقامت قبل از ورود به خدمت : از شخص سئوال شود که

قبل از ورود به خدمت در کدام یک از استانها زندگی میکرد است

در جلوی نام استان یا فرمانداری که او نام میدهد علامت

بگذارید . چنانچه قبل از ورود به خدمت در ایران زندگی

نمیکرده است در مربع مقابل کلمه " خارج " علامت بگذارید و

نام کشور گفته شده را بنویسید .

۱۰- منشأ نژادی و قبیله ای : از شخص سئوال کنید شهری است یا

از عشایر است چنانچه نامبرده پیوستگی خود را به قبیله ای مشخص

نکرد مربع غیر از قبیله ای را علامت بگذارید در غیر اینصورت وابستگی

او را به قبیله یا اقلیتی تعیین نمائید . چنانچه شخص

بایستی در ستون " سایر قبایل " ثبت گردد نام گروه یا قبیله

او را روی خطی که در زیر کلمه " سایر قبایل " است بنویسید .

۱۱- زبانهای که به ترتیب درجه روانی با آن صحبت میکند :

از شخص مورد آزمایش سئوالات زیر را بنمائید .

"How many younger brothers do you have?"

"How many older sisters do you have?"

"How many younger sisters do you have?"

Where the answer is "None", enter zeroes.

7. Marital Status: Ask the subject the following questions:

"Do you have a wife?". If the answer is "Yes", ask "How many?" and record the number. If the answer is "No", enter zeroes.

"Have you divorced a wife?". If the answer is "Yes", ask "How many?" and record the number. If the answer is "No", enter zeroes.

8. Place of Birth: Ask the subject: "Where were you born?" Place a check mark in the square beside the province or chief gubernorate indicated by the subject's response. If he was not born in Iran, place a check mark under "Foreign" and write the name of the country.

9. Place of Residence when Entering Military Service: As the subject: "In what province were you living at the time you entered military service?". Place a check mark in the square beside the province or gubernorate named by the subject. If he was not living in Iran when inducted, place a check mark in the square under "Foreign" and write the name of the country.

10. Ethnic Derivation: As the subject: "Do you belong to a city or to a tribe?" If he does not indicate a tribal affiliation, place a check mark beside the square corresponding to "Nontribal". Otherwise, indicate the tribal or minority affiliation. If the response must be recorded as "Other", write the name of the ethnic group on the line below the word "Other".

11. Languages Spoken, in Order of Fluency:

As the subject the following questions:

"چه زبانهای را میدانید ؟ چنانچه بیش از یک زبان را نام برد سوال کنید "کدامیک را بهتر صحبت میکنید ؟" سپس پاسخ های داده شده را با گذاشتن علامت در مربع مقابل زبان مورد نظر با تعیین درجه يك و دو و سه معین کنید . چنانچه زبانی باشد که باید در محل " سایر زبانها " علامت گذاری شود نام زبان مزبور را روی خط جلوی آن بنویسید . در صورتیکه شخص فقط یک زبان بخوبی مسلط باشد فقط ستون درجه "يك" بایستی علامت گذاری شود و دو ستون دیگر خالی بمانند . اگر شخص فقط بدو زبان بخوبی مسلط باشد ستون سوم خالی میماند . در این مورد بیش از سه زبان یادداشت نخواهد شد . فقط يك علامت در هر ستون گذاشته خواهد شد . چنانچه شخص مورد آزمایش به دو یا چند زبان بطور مساوی مسلط باشد درجه بندی آن منوط به استفاده مکرر و بیشتر از آن میباشد . بنابراین زبانی که بیشتر مورد استفاده است در ستون "يك" بهمین ترتیب برای زبانهای دیگر .

۱۲- سوابق تحصیلی : از شخص مورد آزمایش پرسشهای زیر را بعمل آورید :

"آیا به یک دبیرستان رفته اید ؟" اگر رفته است "چند سال ؟" آیا بدبستان رفته اید ؟" اگر رفته است "چند سال ؟" آیا به دانشگاه رفته اید ؟" اگر رفته است "چند سال" این سوال شامل دوره های تخصصی مانند حقوق و پزشکی نیز میباشد . "آیا پس از پایان تحصیلات متوسطه در دوره های تحصیلی دیگری هم شرکت کرده اید ؟" اگر چنین است "چند سال ؟" این دوره ها شامل کلیه دوره هایی است که جنبه آموزشی و راهبردی قبل از شروع بحرفه ای شخص آنها گذاشته اند . مانند دوره های منشی گری یا دوره های آموزشی صنعتی در این مورد تعداد سالهای گفته شده را در مربعهای مربوطه بنویسید و اگر جواب منفی بود در آن محلها صفر قرار دهید .

۱۳- شغل اصلی قبل از ورود به خدمت : از شخص مورد آزمایش سوال کنید "شغل اصلی شما قبل از ورود به خدمت چه بوده ؟" ردیف شغلی او را با علامت گذاشتن مربع مربوطه تعیین کنید . انواع مشاغلی را که در فرم بیان گردیده بطور خلاصه در زیر متذکر

"What languages do you know?". If he names more than one, ask "Which do you speak better?" and record the answers by placing a check mark in the square beside the appropriate language under the appropriate heading, "1st", "2d", or "3d". If a language must be recorded as "Other", write the name of it on the line beside "Other". If the subject is fluent in only one language, only the column headed "1st" should contain a check mark with the other two left blank. If he is fluent in only two languages, the third column will be left blank. No more than three languages will be recorded. There should be only one check mark in a column. If a subject is equally fluent in more than one language, they should be ranked according to relative frequency of use, the one used most frequently being checked in the first column, and so on.

12. Years of School Completed: Ask the subject the following questions:

"Did you attend a maktab?". If so, "How many years?". "Did you attend elementary school?". If so, "How many years?". "Did you attend a university?". If so, "How many years?". This will include years of post-graduate study in professional institutions such as law school or medical school. "Have you attended other schools beyond high school?". If so, "How many years?". These schools will include all those providing training of a subprofessional or vocational nature, such as secretarial schools or industrial training schools. Record the number of years in the appropriate squares, entering zeroes when the answer is "None".

13. Main Occupation Before Entering Military Service: Ask the subject: "What was your main occupation before entering military service?". Record the answer by a check mark beside the appropriate category. The kinds of employment listed are defined briefly as follows:

میگردد .

تخصصی یافنی : اشخاصیکه شغل ووظیفه آنها نیاز به تحصیلات دانشگاهی دارد مانند دکتر ها وکلای دادگستری و مهندسين و دبیران لیسانسبه .

کارمند اداری : اشخاصی که در موسسات خصوصی و ادارات دولتی بانجام کارهای دفتری اشتغال دارند و ممکن است نیاز به آموزش تخصصی یا تجربه ای داشته و یا نداشته باشند ولی بطور قاطع احتیاج به تحصیلات دانشگاهی ندارند . مانند کتاب دارها ، منشی ها ، کارمندان دفتری و تحویلداران بانکها فروشنده کی و تجارت : افرادیکه برای بدست آوردن سود مستقیا با خرید و فروش کالا سروکار دارند مانند صاحبان بامدیران بنگاهها ، خریداران ، فروشندگان ، دست فروشها اشخاصیکه در ساختن کالا برای فروش از قبیل کارهای دستی دخالت دارند جز : این دسته محسوب نمیگردند . حتی اگر فرآورده حاصله را شخصا بفروش برسانند .

کارگر مزرعه : زارعین و کارگران مزرعه و افرادیکه در جنگلبانی و شیلای و بطور کلی اشخاصیکه در عملیات کشت و تولید غلات ، دام پروری و محصولات جنگلی و در امور مربوط به عملیات تجاری شیلای سروکار دارند جز : این دسته محسوب نمیگردند لکن افرادی از قبیل کله داران مهاجر ، صاحبان مزارع پانماندگان آنها که فقط وابستگی جزئی با امور کشاورزی روزانه و همچنین سایر اشخاصیکه وابستگی های مشابهی با امور تولیدی در مزارع و یا جنگل و یا شیلای دارند جز : این دسته محسوب نمیگردند .

کارگر ماهر غیر زارع : افرادیکه حرفه آنها نیاز به آموزش و یا استعداد دارد از قبیل صنعتگران ، مکانیک ها و یا کارگران مشابهی که در امور بازرگانی فعالیت نموده و کار آنها اکثرا با دست انجام میگردد .

کارگر معمولی غیر زارع : اشخاصیکه حرفه آنها نیاز به آموزش زیاد و یا استعداد بخصوصی ندارد از قبیل باربرها ، خدمتگزاران کارکرانی که در خارج از مزارع کشاورزی ، جنگلبانی و شیلای به خدمت مشغول میباشند .

دانش آموزان : اشخاصیکه قبل از ورود به خدمت در مدارس نام

Professional or Technical: Members of the learned professions whose duties require a college or university education, such as doctors, lawyers, engineers, and college-trained teachers.

Office Worker: Persons who do "desk work" in business and government offices which may or may not require specialized training or experience, but which definitely does not require a college or university education. Examples are book-keepers, secretaries, clerical workers, and bank tellers.

Sales and Merchandising: Persons directly concerned with buying and selling merchandise for profit, such as store owners or managers, buyers, salespersons, and peddlers. It does not include persons engaged in the manufacture of goods for sale, such as handicrafts, even though they sell the products themselves.

Farm Worker: Farmers, farm laborers, and persons employed in forestry and fisheries, directly engaged in the growing or production of crops, livestock, or forest products, or in commercial fishery operations. It does not include migratory herdsmen or farm landlords or their agents who have only a remote connection with day-to-day agricultural operations or persons similarly remote from direct production occupations in the fields of forestry and fisheries.

Skilled Non-Farm Worker: Artisans, mechanics, and similarly skilled workers in trades whose activities are primarily manual but which require considerable training or special aptitude.

Unskilled Non-Farm Worker: Persons engaged in work requiring no extensive training or special aptitude, such as porters, janitors, and laborers outside the fields of agriculture, forestry or fisheries.

Student: Persons who were actually

نویسی کرده و یا اخیراً تحصیلات دانشگاهی خود را بطور کامل یا ناقص پایان رسانیده اند .

کله داری : کلیه افراد یک بااله ورمه خود بین مراتع فصلی کوچ کرده ، معاش خود را از این راه کسب مینمایند .

مشاغل دیگر : کلیه افراد یک شغل آنها تحت هیچیک از طبقات مذکوره در فوق قرار نمیگیرد و همچنین کسانی که شغلشان درآمدی ندارد .

۱۴- محل خدمت : باگذشتن علامت در مربع مربوطه ، مشخص کنید که شخص در نیروی زمینی یا هوایی و یا دریائی انجام وظیفه مینماید .

۱۵- طول خدمت : مدت زمانیکه شخص در خدمت نیروهای مسلح شاهنشاهی بوده است (بسال و بهاء) یادداشت نمایند .

۱۶- درجه : درجه شخص را بوسیله علامت تعیین نمایند .
(درستون راست ، کسانی که در نیروی زمینی و هوایی و درستون چپ آنهاست در نیروی دریائی خدمت میکنند) .

۱۷- خدمت نظامی ، (اشخاص تحت آموزش شامل این قسمت نمیشوند)

مفهوم این عنوان آنست که این قسمت شامل کسانی که تحت آموزش هستند نمیشود . برای افراد بالاتر از پایه تحت آموزش ، باگذاردن علامت در مربع مربوطه (تحت رسته ای که شخص وابسته بآن است) مشخص کنید .

۱۸- اطلاعات مربوط به اندازه گیری اندام : شش فقره اطلاعاتیکه بایستی در این قسمت ثبت گردد . بجایگاه شماره ۱ محول شده . این اقدام بخاطر سهولت کار سایر جایگاههای است که وظایف اندازه گیری را بهمه دارند .

(۱) از شخص سؤال کنید ، " آیا هرگز عینک استعمال کرده اید ؟ " جواب را باگذاردن علامتی در مربع مربوطه مشخص نمایند . (منظور عینک ذره بینی است)

(۲) بوسیله جدول آزمایش دید طبیعی چشم نزدیک بینی شخص را امتحان کنید و باگذاردن علامت در مربع مربوطه معلوم دارید که شخص از لحاظ دید طبیعی و یا

enrolled in schools, or had recently completed part or all of a course of study at a school, at the time of entering military service.

Herdsmen: All persons who migrate with herds and flocks between seasonal pastures and derive their livelihood thereby.

Other Employment: All persons whose occupations cannot reasonably be placed in any of the preceding categories, as well as persons who had no gainful occupation whatever.

14. Service: Indicate by a check mark whether the subject is a member of the Ground Forces, the Air Force, or the Navy.

15. Length of Service: Record the number of years and months the subject has been a member of the armed forces.

16. Rank: Indicate the subject's rank by a check mark. If he is a member of the Ground Forces or Air Force, find the rank listed in the right-hand column. If he is a member of the Navy, find the rank listed in the left-hand column.

17. Military Duty (Except Trainees):

As the heading specifies, this part does not apply to Trainees. For personnel above the grade of Trainee, make a check mark in the appropriate square under the Service of which the subject is a member.

18. Anthropometric Data: The six items of information to be recorded here are assigned to Station 1 to lighten work at the other stations, where measurements are taken.

(1) Ask the subject: "Do you ever wear eye glasses?". Indicate the answer by a check mark in the appropriate square.

(2) Test the subject for apparent short-sightedness by means of a standard eye chart. Indicate by a check mark in the appropriate square whether vision appears to be normal or abnormal.

غیر طبیعی است .

(۳) بوسیله جدول مخصوص آزمایش دید رنگ های

(ایشیهارا) ، دید طبیعی رنرها را آزمایش

نموده و نتیجه را در مربع مربوطه با علامت مشخص کنید .

(۴) از شخص سؤال کنید ، آیا با دست راست کار میکند یا

با دست چپ ؟

در صورتیکه شخص نتواند جواب واضحی بدهد باز

اوپرسید که "فرضا میخواهید به سگی سنگ بزنید

چگونه خواهید زد ؟" ، سپس آن دستی را که برای

زدن بکار میبرد ملاحظه کرده ، نتیجه را با علامت

گذاری در مربع مربوطه معلوم دارید .

(۵) وزن ، ترازوی مخصوص توزین در جای مناسبی بکار

میز عضو تیم قرار دارد . از شخص بخواهش کنید که

روی ترازو بایستد و سپس وزن او را به کیلوگرم

(بدون ذکر کسری - نزدیک بعدد صحیح)

یادداشت نمائید .

(۶) درازی انگشت پا ، در حالیکه شخص روی ترازو قرار

دارد ، ملاحظه کنید که کدامیک از انگشت اول یا

دوم پای راست بلند تر است و نتیجه را با علامت گذاری

در مربع مربوطه معلوم دارید .

(3) Test the subject for normal color perception by means of Ishihara's Tests for Colour-Blindness. Indicate the result by a check in the appropriate square.

(4) Ask the subject: "Are you right-handed or left-handed?". If the subject cannot answer clearly make the following request: Please pretend that you are throwing rocks at a dog," and observe which hand is favored. Record the result by a check mark in the appropriate square.

(5) Weight: Platform scales are placed conveniently near the team member's table. The subject is asked to step onto the scales and the team member reads and records the weight to the nearest whole kilogram.

(6) Toe Length: While the subject is standing on the scales, observe whether the first or second toe of the right foot protrudes the farther. Record the result by a check mark in the appropriate square.

جایگاه ۲

اندازه گیریها در حالت ایستاده
 با دستگاه انترپومتر

۷- بلندی قامت

درحالیکه شخص راست ایستاده
 است حد اکثر فاصله از زمین تا
 نوک سر را اندازه بگیرید .



Station 2

Standing Measurements
 with Anthropometer

7. Height (Stature)

Subject stands erect. Measure maximum distance from floor to top of head.

۸- بلندی تا گردن

درحالیکه شخص راست ایستاده
 است بموازاات ستون فقرات
 از پشت با دستگاه انترپومتر
 فاصله عمودی از زمین تا قاعده
 گردن را اندازه بگیرید (بر
 جستگی زائده فقرات
 هفتمین مهره گردن)



8. Cervical Height

Subject stands erect. Measure vertical distance from floor to base of neck (protrusion of the spinous process of the seventh cervical vertebra) with anthropometer parallel to the spinal column along the back.

۹- بلندی تا شانه

درحالیکه شخص راست ایستاده
 است فاصله عمودی از زمین تا
 کنار خارجی شانه راست را اندازه بگیرید
 (آکرومیون)



9. Shoulder Height

Subject stands erect. Measure vertical distance from floor to outer edge of right shoulder (acromion).

۱۰ - بلندی تا کمر

درحالیکه شخص راست ایستاده
است فاصله عمودی از زمین تا
بالای استخوان لگن راست را اندازه
بگیرید .



10. Waist Height

Subject stands erect. Measure vertical distance from floor to top of right hip bone.

۱۱ - بلندی تا خشتک

درحالیکه شخص راست ایستاده
است فاصله عمودی از زمین تا
خشتک را اندازه بگیرید .
توجه : عدد خوانده شده در روی صفحه
آنتروپومتر فاصله لبه بائینی
بازوی آنتروپومتر را تا خشتک
نشان میدهد . بنابراین بایستی
۱۰ میلیمتر عرض بازوی آنتروپومتر
به عدد خوانده شده اضافه کرد
تا بلندی واقعی خشتک بدست آید .



11. Crotch Height

Subject stands erect. Measure vertical distance from floor to crotch.

NOTE: The scale on the anthropometer indicates the distance from the lower edge of the anthropometer arm. Therefore, ten (10) millimeters (the width of the arm) must be added to the recorded figure to obtain the true Crotch Height.

۱۲ - بلندی تا زانو

درحالیکه شخص راست ایستاده
است فاصله عمودی از زمین
تا بالای کاسه زانوی راست را اندازه بگیرید .



12. Knee Height

Subject stands erect. Measure vertical distance from floor to top of right kneecap.

۱۳- بلندی تاما هیجه ساق پا

در حالیکه شخص راست ایستاده
است فاصله عمودی از زمین تا
نقطه کلفت ترین محیط ماما هیجه ای
ساق پای راست را اندازه بگیرید.



13. Calf Height

Subject stands erect. Measure vertical distance from floor to point of maximum calf circumference on right leg.

۱۴- طول دست در حالت کشیده به جلو

در حالیکه شخص راست و بیست
وضعیت زیرین ایستاده است
شانه بدیوار چسبیده، دست راست
کشیده به جلو، کف دست روی پائین
نوک انگشت شست و سبابه پاتشکیل
یک بیض بهم چسبیده، فاصلهاز
دیوار تا نوک شست را اندازه بگیرید.



14. Functional Arm Reach Forward

Subject stands erect with his shoulders pressed against wall, right arm extended forward, palm down, and top of thumb and forefinger pressed together, forming an oval. Measure perpendicular distance from wall behind shoulder to tip of thumb.

جایگاه ۳

الف - اندازه گیریها در حالت ایستاده
با کولیس بزرگ

Station 3

A. Standing Measurements with Large Sliding Caliper

۱۵- طول کت

در حالیکه شخص راست ایستاده
و بازوان وانگشتان دود ستبره
پائین آویزان است فاصله عمودی
بین قاعده گردن شانه راست تا
اولین برآمدگی شست راست را
اندازه بگیرید.



15. Coat Length

Subject stands erect, arms and fingers hanging down. Measure vertical distance between base of neck at right shoulder and first knuckle of right thumb.

۱۶- عرض لگن (ایستاده)

درحالیکه شخص راست ایستاده
است حداکثر فاصله سرتاسری
لگن هارا اندازه بگیرید •



16. Hip Breadth, Standing

Subject stands erect. Measure maximum distance across the hips.

۱۷- عرض سینه

درحالیکه شخص راست ایستاده
وبطور طبیعی تنفس میکند عرض
سینه را از روی پستانها اندازه بگیرید •



17. Chest Breadth

Subject stands erect and breathes normally. Measure breadth of chest at nipple level.

۱۸- عمق سینه

درحالیکه شخص راست ایستاده وبطور
طبیعی تنفس میکند عمق سینه را از روی
پستانها در طرف راست اندازه بگیرید •



18. Chest Depth

Subject stands erect and breathes normally. Measure depth of chest from right side at nipple level.

ب - اندازه گیریهای دست با کولیس کوچک

B. Hand Measurements with Small Sliding Caliper

۱۹- طول دست

درحالیکه شخص راست ایستاده
دست راست را بجلو باز کرده بکف
دست بطرف بالا وانگشتان مستقیم است
فاصله بچ دست (ناوبکولر) تا نوک انگشت
وسطی را اندازه بگیرید •



19. Hand Length

Subject stands erect with right hand extended forward, palm up and fingers straight. Measure distance from wrist (navicular) to tip of middle finger.

۲۰- طول کف دست

درحالیکه شخص بوضعیت شماره ۱۹ قرار گرفته فاصله میج دست تا قاعده انگشت وسطی را اندازه بگیرید.



20. Palm Length

With right hand in same position as for No. 19, measure distance from wrist to base of middle finger.

۲۱- عرض دست

درحالیکه دست راست شخص به وضعیت شماره ۱۱ و ۲۰ قرار گرفته حداکثر عرض دست را از قاعده انگشتان اندازه بگیرید.



21. Hand Breadth

With right hand in same position as for No. 19 and No. 20, measure maximum breadth across base of fingers.

جایگاه ۴

اندازه گیریها درحالت نشسته با دستگاه آنتروپومتر.
درحالیکه شخص راست روی میز یا نیمکت نشسته و پاها را خود را روی یک زیربانی مسطح محکم قرار داده است باقرار دادن تعداد کافی تخته های صاف در زیر پای شخص بلندی زیربانی را طوری تنظیم کنید که زانوی راست زاویه قائمه ای تشکیل دهد.

Station 4

Sitting Measurements
with Anthropometer

Subject sits erect on flat-topped table or bench with his feet on a firm flat footrest. The height of the footrest should be adjusted by placing enough flat boards under the subject's feet so that his knees are at right angles.

۲۲- دست کشیده به بالا

درحالیکه شخص بازو و انگشتان دست راست را بطرف بالا کشیده فاصله عمودی از نشیمنگاه تا نوک انگشت وسطی را اندازه بگیرید.

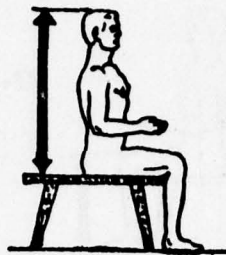


22. Arm Reach Upward

Subject extends right arm and fingers upward. Measure vertical distance from seat to tip of middle finger.

۲۳- بلندی بدن در حالت نشسته

فاصله عمودی از نشیمنگاه تا نوک سر
را اندازه بگیرید .

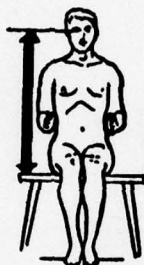


23. Sitting Height

Measure vertical distance from seat to top of head.

۲۴- بلندی تاج چشم

فاصله عمودی از محل نشیمنگاه تا سطح
کوشه داخلی چشم راست را اندازه بگیرید .
لازم نیست که نقطه یاد شده با دستگاه
آنتروپومتر لمس شود چونکه نقطه
مزبور را با نگاه کردن ببازوی دستگاه
میتوان تعیین نمود .



24. Eye Height

Measure vertical distance from seat to level of inner corner of right eye. It is not necessary to touch the latter point with the instrument, since it can be located by sighting along the anthropometer arm.

۲۵- بلندی تا وسط شانه

فاصله عمودی از محل نشیمنگاه تا
نقطه وسط بین مفصل گردن و شانه
بالای لبه خارجی شانه راست را اندازه
بگیرید .



25. Mid-Shoulder Height

Measure vertical distance from seat to point midway between neck-shoulder junction and top of outer edge of right shoulder.

۲۶- بلندی تا شانه

فاصله عمودی از محل نشیمنگاه تا بالای
کنار خارجی شانه راست را اندازه بگیرید .

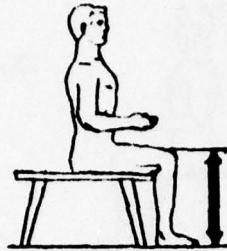


26. Shoulder Height

Measure vertical distance from seat to top of outer edge of right shoulder.

۲۷- بلندی تازانو

فاصله عمودی از زیربائی تا بالای زانوی
راست را اندازه بگیرید .



27. Knee Height

Measure vertical distance from
footrest to top of right knee.

۲۸- بلندی تاپشت زانو

فاصله عمودی از زیربائی تا سطح پشت
زانوی راست را اندازه بگیرید .



28. Popliteal Height

Measure vertical distance from
footrest to underside of right
knee.

توجه : عدد خوانده شده در روی دستگاه
آنتروپومتر فاصله از لبه پائین بازوی
آنتروپومتر را نشان میدهد . بنابراین
۱۰ میلیمتر (عرض بازو) بایستی بعدد
خوانده شده اضافه گردد تا بلندی واقعی
تاپشت زانو بدست آید

NOTE: The scale on the anthro-
pometer indicates the
distance from the lower
edge of the anthropometer
arm. Therefore, ten (10)
millimeters (the width
of the arm) must be added
to the recorded figure
to obtain the true
Popliteal Height.

جایگاه - ۵

اندازه گیر بهاد در حالت نشسته با کولیس بزرگ .
در حالیکه شخص راست روی میز پانیمکت
نشسته و پاها را روی یک زیربائی مسطح
محکم گذاشته است باقی-راردادن تعداد
کافی تخته های صاف در زیر پای او بلندی
زیربائی را طوری تنظیم کنید که زانوی راست
زاویه قائمه را تشکیل دهد .

Station 5

Sitting Measurements with Large Sliding Caliper

Subject sits erect on flat-topped
table or bench with his feet on
a firm flat footrest. The height
of the footrest should be adjusted
by placing enough flat boards
under the subject's feet so that
his knees are at right angles.

۲۹- طول دست کشیده به جلو

درحالیکه شخص بازو و انگشتان دست راست را بحالت موازی بازمین به جلو کشیده فاصله از پشت شانه راست (بزرگترین برآمدگی عضله و ذنقه ای) تا نوک انگشت وسطی را اندازه بگیرید.



29. Arm Reach Forward

Subject's right arm and fingers are extended forward parallel to the floor. Measure distance from back of right shoulder (greatest bulge of trapezius) to tip of middle finger.

۳۰- طول شانه تا آرنج

درحالیکه شخص بازوی راست را بطرف باینین به پهلو آویزان وساعد را با زاویه قائمه بطرف جلو کشیده است فاصله عمودی از لبه شانه راست تا آرنج راست را اندازه بگیرید.



30. Shoulder-Elbow Length

Subject's right upper arm hangs down at his side, forearm is extended forward at right angles. Measure the vertical distance from the edge of right shoulder to right elbow.

۳۱- طول ساعد تا دست

درحالیکه شخص بازوی راست را بطرف باینین به پهلو آویزان وساعد را با زاویه قائمه بطرف جلو کشیده است فاصله آرنج تا نوک انگشت وسطی را اندازه بگیرید.



31. Forearm-Hand Length

Subject's right upper arm hangs down at his side, forearm and fingers extended forward at right angles. Measure the distance from the elbow to the tip of the middle finger.

۳۲- عرض شانه

درحالیکه شخص بازوی راست را بطرف باینین به پهلو آویزان وساعد ها و انگشتان را با زاویه قائمه بطرف جلو کشیده است (آرنج ببدن چسبیده) حداکثر فاصله عضلانی دو بازو را اندازه بگیرید.



32. Shoulder Breadth

Subject's upper arms hang down at his sides and forearms are extended forward at right angles, elbows against the body. Measure the maximum distance across the upper arm muscles.

۳۳- عرض آرنج به آرنج

درحالیکه شخص بوضعیت شماره ۳۲
قرار گرفته از عقب حداکثر فاصله بین
دو آرنج را اندازه بگیرید .



33. Elbow-Elbow Breadth

Subject is in the same position as for No. 32. From behind the subject, measure the maximum distance across the elbows.

۳۴- حد اکثر عرض ساعد به ساعد

درحالیکه شخص بوضعیت شماره ۳۲-۳۳
قرار گرفته حداکثر فاصله بین دو ساعد
را اندازه بگیرید .

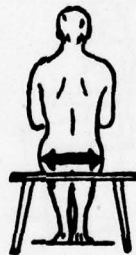


34. Maximum Forearm-Forearm Breadth

Subject is in the same position as for No. 32 and No. 33. Measure the maximum distance across the forearms.

۳۵- عرض لگن درحالت نشسته

حداکثر فاصله سرتاسری دو لگن را اندازه
بگیرید .



35. Hip Breadth, Sitting

Measure maximum distance across the hips.

۳۶- طول کفل تا زانو

فاصله بین سطح برآمده کفل راست تا
جلوی کاسه زانوی راست را اندازه بگیرید .



36. Buttock-Knee Length

Measure distance from rear projection of right buttock to front of right kneecap.

۳۷- طول کفل تا پشت زانو

فاصله بین سطح برآمده کفل راست تا پشت زانوی راست را اندازه بگیرید .
 توجه : عدد خوانده شده در روی دستگاه آنترپومتر: فاصله از لبه پائین بازوی آنترپومتر نشان میدهد . بنابراین ۱۰ میلیمتر (هر ۱۰ بازو) بایستی به عدد خوانده شده اضافه گردد تا طول واقعی کفل تا پشت زانو بدست آید .



37. Buttock-Popliteal Length

Measure distance from rear projection of right buttock to back of right knee.

NOTE: The scale on the anthropometer indicates the distance from the lower edge of the anthropometer arm. Therefore, ten (10) millimeters (the width of the arm) must be added to the recorded figure to obtain the true Buttock-Popliteal Length.

جایگاه ۶

اندازه گیریهای سطحی در حالت ایستاده با متر نواری بطوریکه متر روی بدن قرار گیرد .

Station 6

Surface Measurements with Tape Following Contours of Body, Subject Standing

۳۸- طول پشت تا کمر

در امتداد ستون فقرات از قاعده کمر تا سطح کمر را (بالای استخوان لگن) اندازه بگیرید .



38. Back-Waist Length

Measure along spinal crease of back from base of neck to level of waist (top of hip bones).

۳۹- طول شانه

در امتداد بالای شانه راست از محل اتصال گردن به شانه تا لبه خارجی شانه راست را اندازه بگیرید .

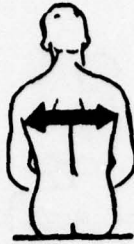


39. Shoulder Length

Measure along top of right shoulder from junction of neck to level of waist (top of hip bones).

۴۰- عرض بین دو چین زیر بغل

در حالیکه بازوان شخص بهائین آویخته
است از پشت سرتاسر بین دو چین زیر بغل را
اندازه بگیرید .



40. Interscye Breadth

Subject's arms are hanging down.
Measure across back between arm-
pit creases (scye points).

۴۱- حد اکثر عرض دو چین زیر بغل

در حالیکه بازوان و دستهای شخص کاملاً به
طرف جلو کشیده شده از پشت جداقل بین
دو چین زیر بغل را اندازه بگیرید .



41. Interscye Maximum

Subject's arms and hands are
extended fully forward. Measure
minimum distance across the back
between the scye points.

۴۲- درز داخلی آستین

در حالیکه بازوان و انگشتان شخص در امتداد
مستقیم قرار گرفته و بازوی راست بازو به
۴۵ درجه دور از بدن نگاه داشته شده فاصله
جلو لبه زیر بغل راست تا شکاف بین انگشت
شست و پنج دست را اندازه بگیرید .



42. Sleeve Inseam

Subject's arms and fingers are
straight and right arm is held
away from the body at a 45-degree
angle. Measure distance from
front edge of right armpit to
notch between thumb and wrist.

۴۳- طول آستین

در حالیکه بازوان شخص بالا و افقی نگاه داشته
شده و ساعد ها با بازوان زاویه ۹۰ درجه
تشکیل داده و از جلودستها بصورت مشت شده
در برابر یکدیگر قرار گرفته و بند های آخر
انگشتان باهم تماس دارند از خط ستون فقرات
وروی آرنج راست تا جگه راست را (وسط زائده
استیلوئید) اندازه بگیرید .



43. Sleeve Length

Subject's upper arms are raised
and pointing horizontally, fore-
arms crooked at a 90-degree
angle, and hands making fists.
Place the two fists against each
other in front, knuckles touching.
Measure from spinal crease, over
the right elbow, to right wrist
(middle of styloid process).

جایگاه ۷

اندازه گیریهای محیطی در حالت ایستاده
با متر نواری •

۴۴ - سر

حداکثر دور سر در ناحیه پیشانی از بالای
گوشه‌ها اندازه بگیرید •



Station 7

Circumference Measurements
with Tape, Subject Standing

44. Head

Measure maximum circumference
at forehead, above ears.

۴۵ - گردن

دو گردن به فاصله از زیر برجستگی سیب‌آدم را
اندازه بگیرید •



45. Neck

Measure circumference just below
top of Adams's apple.

۴۶ - دور شانه

دور بالای تنه از روی برآمدگی
عضلانی قسمت بالای بازو را اندازه بگیرید •



46. Shoulder

Measure circumference of upper
body, over bulges of upper arm
muscles.

۴۷ - سینه

درحالیکه شخص بطور طبیعی تنفس
مینماید دورسینه را در سطح پستانها
اندازه بگیرید .



47. Chest

Subject is breathing normally.
Measure chest circumference at
nipple level.

۴۸ - کمر

دورکمر در سطح ناف درحالیکه شکم آزاد
است . متر نواری را درحالیکه شکم
بداخل کشیده شده دورکمر قرار دهید
سپس از شخص بخواهید شکم خود را آزاد
نگاهدارد (آزادتر کند) وقتی کاملاً آزاد
نگاهداشت متر را شل کرده دورکمر را
اندازه گرفته بخوانید .



48. Waist

Circumference at level of navel
with abdomen relaxed. Place tape
around waist with abdomen "sucked
in". Ask subject to relax ("let
it out") and loosen tape as ab-
domen is relaxed. Read circum-
ference when fully relaxed.

۴۹ - لگن

دورلگن ها را از سطح بزرگترین قسمت کمر
اندازه بگیرید .



49. Hip

Measure circumference around
hips at level of greatest
buttock protrusion.

۵۰ - دور عمودی تنه

دور عمودی تنه را از میان خشتک و از روی کمر
راست و روی نقطه وسط شانه راست اندازه
بگیرید .



50. Vertical Trunk

Measure vertical circumference
through the crotch, over the
right buttock, and over the
midpoint of the right shoulder.

حایگاه ۸

اندازه‌گیریهای محیطی اضافی در حالت ایستاده با متر نواری .

۵۱ - اتصال بازو و شانه .

در حالیکه بازوی راست شخص مستقیم بیانشین آویزان است دور عمودی محل اتصال بازو و شانه را از بالاترین قسمت زیر بغل راست و روی اکرومیون با متر نواری اندازه بگیرید (گره واقع در بالای کتف خارجی شانه راست) .



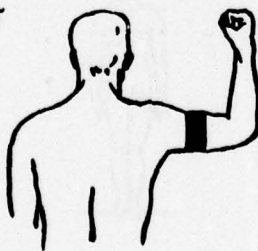
۵۲ - بالای بازو .

دور وسط بازوی راست را در ناحیه بین شانه و آرنج در حالیکه عضله دو سر آزاد است اندازه بگیرید .



۵۳ - عضله دو سر .

دور بازوی راست را در حالت انقباض عضله دو سر و دست مشت شده اندازه بگیرید .



Station 8

Additional Circumference Measurements with Tape, Subject Standing

51. Arm scye

Subject's right arm is hanging straight down. Measure vertical circumference with tape as high as possible under right armpit and passing over acromion (knob on top of outside edge of right shoulder).

52. Upper Arm

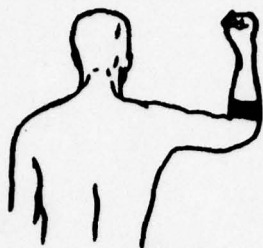
Measure circumference of right upper arm midway between shoulder and elbow with biceps relaxed.

53. Biceps

Measure circumference on right arm with biceps flexed and hand making a fist.

۵۴ - ساعد .

حد اکثر دور ساعد راست را در حالت
انقباض عضلانی و دست مشت شده
اندازه بگیرید .



54. Forearm

Measure maximum circumference
around right forearm with muscle
flexed and hand making a fist.

۵۵ - مچ .

دور مچ دست راست را در ناحیه بالای
برآمدگی استخوان مچ اندازه بگیرید .



55. Wrist

Measure circumference of right
wrist above protrusion of the
wristbone.

۵۶ - دست .

دور دست راست را در سر تا سر قاعده
انگشتان اندازه بگیرید .



56. Hand

Measure circumference of right
hand around base of fingers.

۵۷ - خشتان - ران .

دور ران راست را بلافاصله از زیر
چین کمر اندازه بگیرید .



57. Crotch-Thigh

Measure circumference of right
thigh just below buttock crease.

۵۸ - بائین ران

دور ران را بلافاصله از بالای استخوان
کشک انداز بگیرد .



58. Lower Thigh

Measure circumference of right thigh just above kneecap.

۵۹ - ساق پا

دور ساق پای راست را از ضخیم
ترین قسمت آن اندازه بگیرد .



59. Calf

Measure on right leg at point of greatest calf circumference.

۶۰ - فوزك

دور ساق پای راست را از ناحیه باریک ترین
قسمت بالای استخوان فوزك اندازه
بگیرد .



60. Ankle

Measure on right leg at point of least circumference above ankle bone.

جایگاه ۹

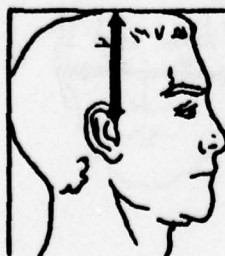
اندازه گیریهای سردر حالت نشسته با
کولیس بزرگ . کولیس کوچک و پرگار .

Station 9

Head Measurements with
Large Sliding Caliper,
Small Sliding Caliper,
and Spreading Caliper

۶۱ - بلندی سر

با کولیس بزرگ فاصله عمودی از
برجستگی قدامی گوش راست
(تراژئون) را تا بالای سر اندازه
بگیرد .



61. Head Height

Measure vertical distance from notch in front of right ear (tragion) to top of head with large sliding caliper.

۶۲- طول سر

بایرگار حد اکثر طول سرا از قسدری
بالا ترا چشم هاد روی پیشانی تا پشت
سر اندازه بگیریید .



62. Head Length

Measure maximum length of the head from slightly above the eyes on the forehead to the back of the head with the spreading caliper.

۶۳- عرض سر

بایرگار از پشت شخص حد اکثر عرض
سرا (معمولاً بالا عقب گوشها) اندازه
بگیریید .



63. Head Breadth

Measure, from behind subject, maximum breadth of head (usually above and behind the ears) with the spreading caliper.

۶۴- عرض صورت

بایرگار حد اکثر عرض بین دو برآمدگی
استخوان گونه را اندازه بگیریید .



64. Face Breadth

Measure maximum breadth between the cheekbone bulges with the spreading caliper.

۶۵- قطر زائده قدامی گوشها

بایرگار فاصله برآمدگی غضروفی
(تراژین) گوش راست را تا همان قسمت
دو گوش چپ اندازه بگیریید .

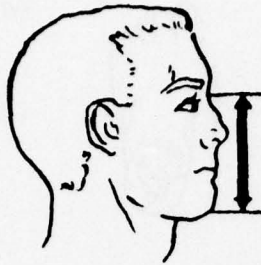


65. Bitragion Diameter

Measure distance from the cartilaginous notch (tragion) of the right ear to same point of the left ear with the spreading caliper.

۶۶- طول صورت

با کولیس کوچک فاصله عمودی بین نوک چانه و فرو رفتگی بین چشمها در بالای بینی را اندازه بگیرید .

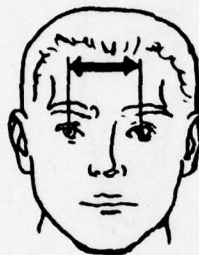


66. Face Length

Measure vertical distance between the tip of the chin and the depression between the eyes at the top of the nose with the small sliding caliper.

۶۷- فاصله دو مردمک چشم

در حالیکه چشمهای شخص مستقیم به جلو نگاه میکند با کولیس کوچک فاصله بین مردمک دو مردمک چشمها را اندازه بگیرید .



67. Interpupillary Distance

With subject's eyes looking straight ahead, measure distance between the centers of the pupils of the two eyes with the small sliding caliper.

جایگاه ۱۰

اندازه گیریهای پا در حالت ایستاده روی یک سطح بلند مسطح مانند میز، نیمکت یا یک جعبه بزرگ و محکم

Station 10

Foot Measurements
Subject Standing on an
Elevated Platform Such
as a Table, Bench or
Large Firm Box

۶۸- طول پا

در حالیکه پای راست شخص درون جعبه پا بطوری قرار گرفته که پاشنه پا به دیواره عقب جعبه و کنار خارجی و راست پهن ترین قسمت پا به دیوار جعبه چسبیده است حداکثر طول پا را از عقب پاشنه تا نوک بلندترین انگشت پا اندازه بگیرید .



68. Foot Length

Subject's right foot is placed in foot box with heel touching the end barricade and with right edge of widest part of foot touching the side barricade. Measure the maximum length of the foot from back of heel to tip of longest toe.

۶۹- طول پشت پا

درحالیکه پای راست شخص بهمان وضعیت
شماره ۶۸ درجه به با قرار دار فاصله
از عقب باشنه پا تا پهن ترین قسمت پا را
اندازه بگیرید . (سینه پا)



69. Instep Length

Subject's right foot is in same position in foot box as for No. 68. Measure distance from back of heel to widest part of foot (ball of foot).

۷۰- عرض پا

درحالیکه پای راست شخص بهمان
وضعیت شماره ۶۸ - ۶۹ درجه به پا
قرار دارد حد اکثر عرض پا را در ناحیه سینه
پا (پهن ترین قسمت پا) اندازه بگیرید .



70. Foot Breadth

Subject's right foot is in same position in foot box as for No. 68 and No. 69. Measure maximum breadth of foot at ball of foot.

۷۱- عرض باشنه پا

درحالیکه شخص روی سطح صافی ایستاده
است با کولیس کوچک حد اکثر عرض باشنه پای
راست را از عقب وزیر برآمدگی های استخوانهای
قوزک اندازه بگیرید .



71. Heel Breadth

Subject stands on flat surface. Measure maximum breadth of right heel behind and below the projections of the ankle bones with the small sliding caliper.

۷۲- دور سینه پا

درحالیکه شخص روی سطح صافی ایستاده
است با متر نواری حد اکثر دور پای راست را
در ناحیه پهن ترین قسمت پا اندازه بگیرید .
(از عقب قاعده پا تا نشان)



72. Ball-of-Foot Circumference

Subject stands on flat surface. Measure maximum circumference of right foot at ball of foot with tape.

۷۳- محیط مورب پاشنه - قوزک

درحالیکه شخص روی سطح صافی ایستاده
است با متر نواری محیط مورب دور قوزک
راست را از روی نوک خلفی پاشنه و روی برجسته
ترین نقطه پشت پاچائیکه پایه ساق متصل
گردد بده است اندازه بگیرید .



73. Heel-Ankle Diagonal

Subject stands on flat surface.
With tape, measure the diagonal
circumference around the right
ankle, around rear tip of the
heel, and over instep where foot
joins the leg.

۷۴- محیط برجسته ترین ناحیه پشت پا

درحالیکه شخص روی سطح صافی ایستاده
است با متر نواری دور برجسته ترین ناحیه
پشت پای راست را از زیر قوس پا در جائیکه
پا با ساق متصل میگردد اندازه بگیرید .



74. Instep Circumference

Subject stands on flat surface.
With tape, measure the circum-
ference over the instep of the
right foot, where the foot joins
the leg, and under the arch.

ضمیمه الف
بررسی اندام
نبروهای مسلح شاهنشاهی
جارت‌های توجیهی

ATTACHMENT A
ANTHROPOMETRIC SURVEY OF
IMPERIAL IRANIAN ARMED FORCES
BRIEFING CHARTS

الف - ۱

A - 1

الف - ۱

بررسی اندازه‌گیری اندام نیروهای مسلح شاهنشاهی ایران

سازمان تحقیقات و ارزیابی زرمی

سرگرد دکتر شجاع‌الدین نورانی

افسر پروژه

خلاصه برنامه توجیه

- مقدمه
- شرح مفهفا
- سابقه مطالعه
- حدود بررسی
- اطلاعات غیر از اطلاعات اندازه گیری بدنی
- طرح نمونه گیری
- مراکز آموزش
- سایر واحدهای نیروی زمینی
- نحوه واحدهای نیروی زمینی انتخاب میشوند
- نیروی هوایی
- نیروی دریائی
- متد اندازه گیری
- آکپ بررسی
- ثباتان اطلاعات
- حرکت اشخاص مورد اندازه گیری
- تسهیلات مورد نیاز
- محل
- میز و صندلی
- محل نقل
- وسایل زندگی
- برنامه بازویدها

هَدَف‌ها

اجرائی برنامه بررسی اندازه گیری اندام نیروهای مسلح شاهنشاهی ایران
بمنظور جمع آوری اطلاعات جامع نسبت به منظورهای زیر:

○ از اطلاعاتی که جمع آوری شده الطیمنان حاصل کنیم که چه
اندازه‌های استاندارد برای یونیفرمها میتوان تعیین نمود.

○ برقراری یک بانک اطلاعات که بتواند اطلاعات
مربوط به عوامل مهندسی انسانی را در اختیار نیروهای مسلح

شاهنشاهی ایران قرار دهد.

سابقه مطالعه

- تصمیم درباره توزیع یونیفرمهای دوخته شده به افسران و درجه داران .
- عدم وجود اندازه های استاندارد جهت طرح یونیفرم در نیروهای مسلح شاهنشاهی ایران .
- اطلاعات درباره مهندسی انسانی شامل اندازه های استاندارد یونیفرم موجود در برسیهای اندازه گیری اندام .
- معاونت ستاد بزرگ ارتش ایران بررسی اندازه گیری اندام نیروهای مسلح شاهنشاهی ایران را امر میفرمایند .
- پروژه بابا لاترین حق تقدم به سازمان تحقیقات و ارزیابی رزمی محول گردیده است
- طرحائی تهیه گردیده که از نمونه پرسنل بحد وسیعی اندازه گیری شود
- اطلاعات بعداً در امریکامورد مطالعه قرار گرفته و تجزیه و تحلیل خواهد شد .

طرح نمونه گیری

تقریباً ۸۱۴۰ نفر از پرسنل نیروهای مسلح شاهنشاهی ایران

نیرو	افسران	سربازان و درجه داران بالاتر از سربازان وظیفه تحت آموزش	سربازان وظیفه تحت آموزش	جمع
نیروی زمینی ۲۴۰		۱۵۰۰	۵۰۰۰	۶۲۴۰
نیروی هوایی ۵۰		۷۰۰	—	۷۵۰
نیروی دریایی ۵۰		۶۰۰	—	۶۵۰
	۳۴۰	۲۸۰۰	۵۰۰۰	۸۱۴۰

نیروی زمینی

تأسیسات	افسر	درجه داران و سربازان بالاتر از سربازان وظیفه تحت آموزش	سربازان وظیفه تحت آموزش	جمع
مرکز آموزش محب شیر				
مرکز آموزش خرم آباد				
مرکز آموزش بیرجند				
مرکز آموزش کرمان				
مرکز آموزش کاد ۳۰۱				
سایر واحدهای تهران	۲۰۰	۵۰۰	۵۰۰۰	۵۲۰۰
باشگاهی مرکز آموزش کاد ۳۰۱ تهران	۴۰	۱۰۰۰	—	۱۰۴۰
	۲۴۰	۱۵۰۰	۵۰۰۰	۶۲۴۰

نیروی هوایی

تأسیسات	افسر	سربازان و درجه داران بالاتر از سربازان وظیفه تحت آموزش	سربازان وظیفه تحت آموزش	جمع
دوشان تپه	۵۰			۷۵۰

نیروی دریایی

تأسیسات	افسر	درجه داران و سربازان بالاتر از سربازان وظیفه تحت آموزش	سربازان وظیفه تحت آموزش	جمع
بندر پهلوی	۱۵	۲۰۰	—	۲۱۵
خرمشهر	۲۵	۴۰۰	—	۴۲۵
	۴۰	۶۰۰	—	۶۴۰

ایکپ بررسی - ۱۵ نفر

۱. نفر افسر پرورده

۲. نفر افسر بهداری

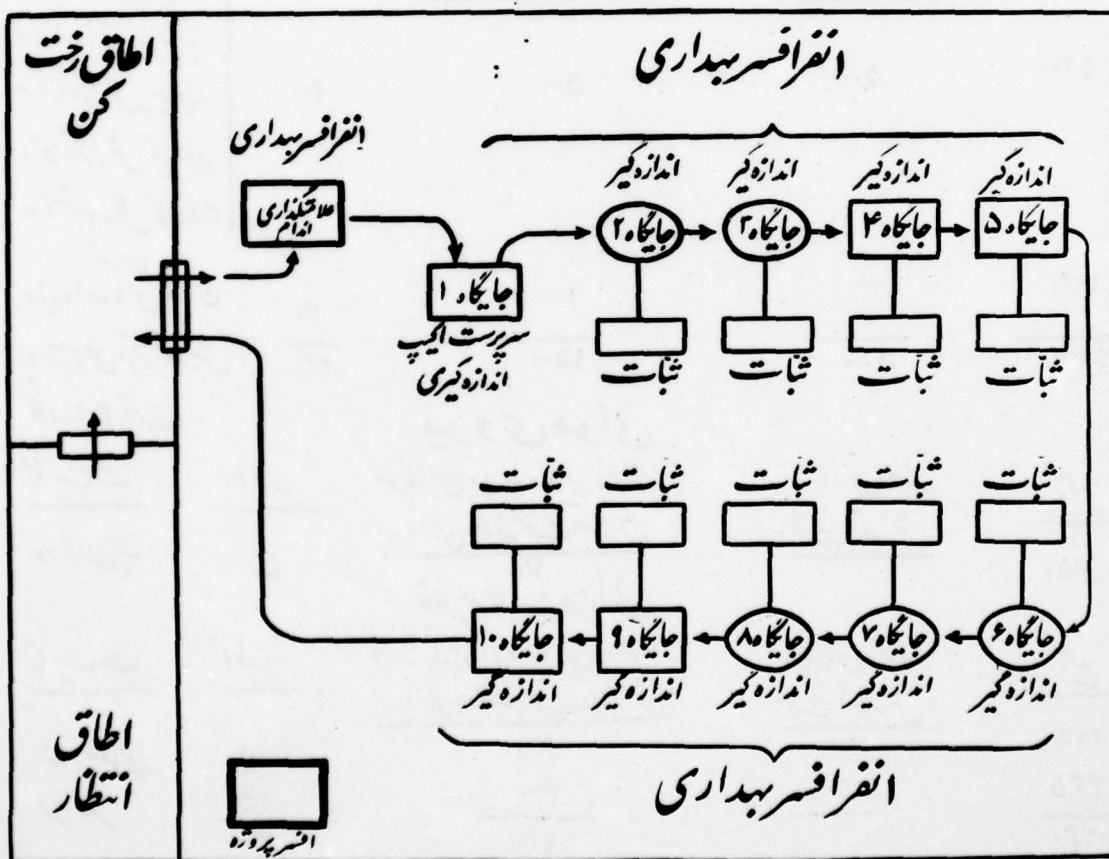
۳. نفر مستشار مؤسسه تراشگل

۴. نفر پرشل اندازه گیر

۵. اعضای مؤقتی که از واحدهای محل اندازه گیری گرفته میشوند

۶. نفر ثبات اطلاعات

۷. حرکت اشخاص مورد اندازه گیری



محلای مورد نیاز

اطاق

- اطاق رخت کن که برای ۲۵ نفر اشخاص مورد اندازه گیری کافی باشد (در صورت لزوم بخاری داشته باشد)
- اطاق انتظار که برای ۲۵ نفر اشخاص مورد اندازه گیری کافی باشد (در صورت لزوم بخاری داشته باشد)
- اطاق برای ۱۰ جایگاه اندازه گیری (در صورت لزوم بخاری داشته باشد)

حداقل جای لازم برای هر یک از جایگاهها ۲ متر در ۴ متر میباشد که همه با هم میشود ۱۲ متر مربع ضرب در ۱۰ متر مربع مساوی است به ۱۲۰ متر مربع

در صورت وجود داشتن یک اطاق دراز متویل ۴ متر در ۳۰ متر کافی است
و در صورت وجود داشتن یک اطاق کوتاهتر متویل ۱۰ متر در ۱۵ متر کافی است
و نیز در صورت وجود داشتن ۲ اطاق هر یک ۴ متر در ۱۵ متر کافی است

میز و صندلی

- اطاق انتظار نیکت یا صندلی جفت ۲۵ نفر
- اطاق رخت کن نیکت یا صندلی برای ۲۵ نفر گیره جالباسی برای ۲۵ نفر
- اطاق یا اطاقهای اندازه گیری: ۳ میز محکم که اشخاص بتوانند روی آن بنشینند که حداقل نیم متر در ۱ متر باشد (جایگاه ۴ و ۵ و ۶)
- نیکت یا میز کوتاه محکم که شخص بتواند روی آن بایستد (برای علامتگذاری در جایگاه ۱۰)
- و برای اندازه گیری (جایگاه ۲)

۱۱ میز - یک میز برای افسر پرورده و ۱۰ میز برای جایگاههای اندازه گیری

۱۵ صندلی - ۱۰ صندلی برای جایگاههای اندازه گیری و ۵ صندلی برای افسر پرورده و سایر نظار
گیره جالباسی جفت کت و کلاه ۲۴ نفر

اندازه‌ها

جایگاه شماره ۱

- | | |
|-------------------------------|--|
| ۱۷. قلم اطلاعات و سوابق کلی | ۹. محل اقامت در موقع ورود به خدمت نظام |
| ۱. محل واحد | ۱۰. نشانژادسی و قبیله‌ای |
| ۲. شماره ردیف فرم ثبت اطلاعات | ۱۱. سبب زبان‌مانی بخوبی صحبت میکنند |
| ۳. نام شخص | ۱۲. سالهای تحصیلی |
| ۴. شماره ردیف نظامی | ۱۳. شغل عمده قبل از ورود به خدمت نظام |
| ۵. سن | ۱۴. در کدام یک از سه نیرو خدمت میکنند |
| ۶. برادر و خواهر | ۱۵. طول خدمت |
| ۷. وضعیت ازدواج | ۱۶. درجه نظامی |
| ۸. محل تولد | ۱۷. وظایف نظامی |

- | | |
|--|---------------------------------------|
| ۵. قلم اطلاعات اندازه‌گیری اندام | ۵. وزن بدن |
| ۱. آیا شخص از عینک استفاده میکند | ۶. آیا انگشت اول یا دوم پامی راست شخص |
| ۲. دید طبیعی و غیر طبیعی | بلند تراست یا برود مساوی است |
| ۳. آیا شخص رنگها را تشخیص میدهد | |
| ۴. آیا شخص با دست راست یا دست چپ و یا برود دست کار میکند | |

اندازه‌ها

جایگاه ۲

۸ قمره اندازه گیری در حالت ایستاده

۲ - بلندی قامت

۸ - بلندی تا گردن

۹ - بلندی تا شانه

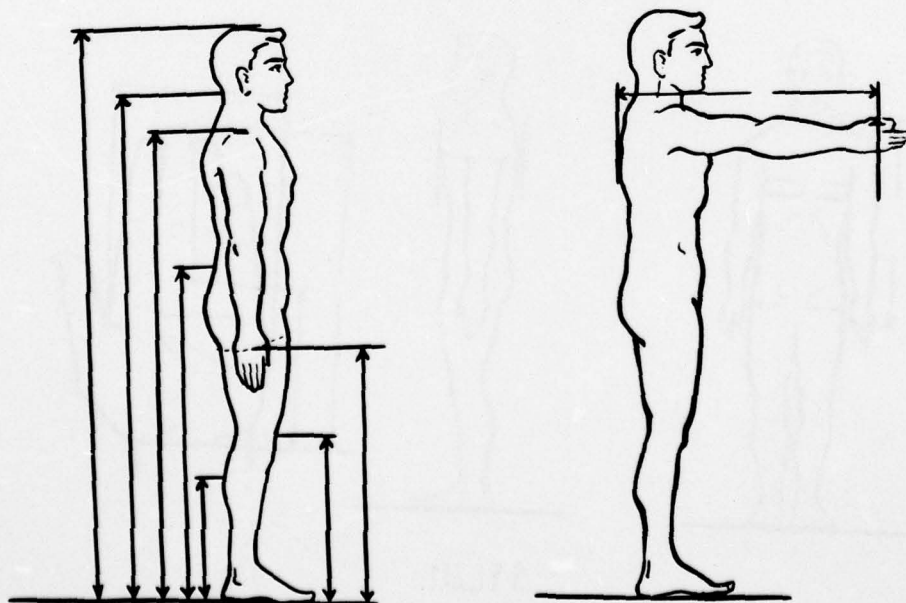
۱۰ - بلندی تا کمر

۱۱ - بلندی تا خشتک

۱۲ - بلندی تا زانو

۱۳ - بلندی تا نرمه ساق پا

۱۴ - طول دست (کشیده بجلو)



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اندازه‌ها

جایگاه ۳

۷ فقره اندازه‌گیری در حالت ایستاده

۱۵- طول کت

۱۸- عمق سینه

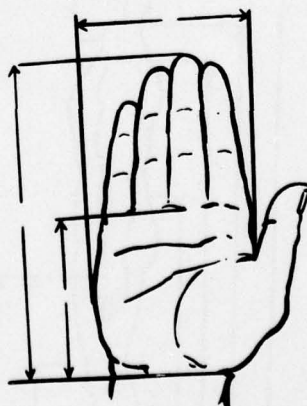
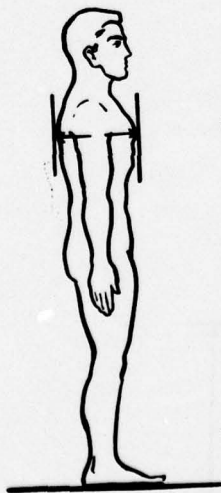
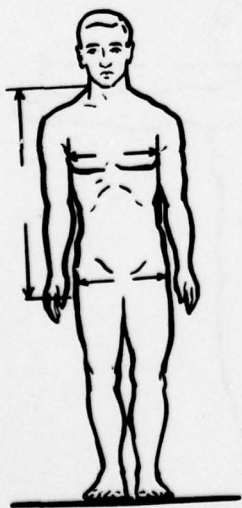
۱۶- عرض لگن

۱۹- طول دست

۱۲- عرض سینه

۲۰- طول کف دست

۲۱- عرض دست



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اندازه‌ها

جایگاه ۴

۷ قمره اندازه‌گیری در حالت نشسته

۲۵ - ارتفاع تا وسط شانه

۲۲ طول دست آکشیه و بیلا

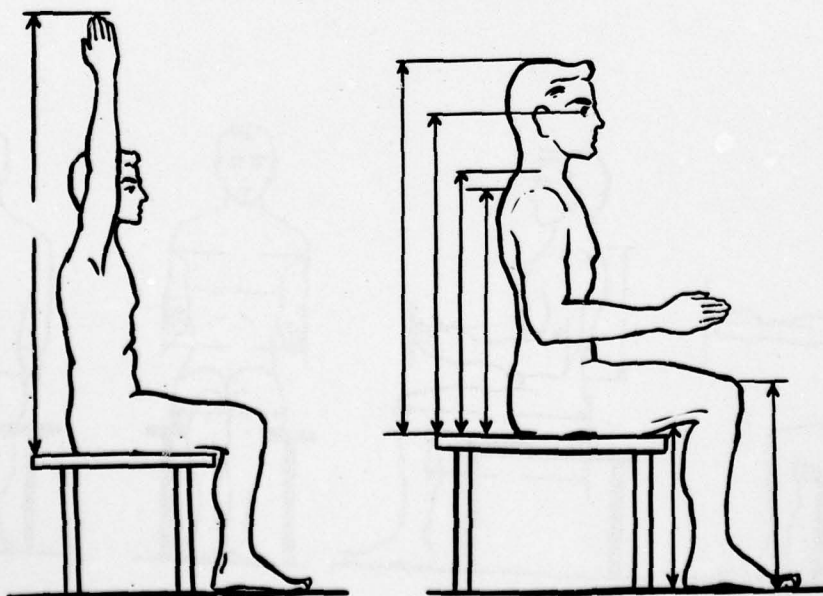
۲۶ - ارتفاع تا شانه

۲۳ - ارتفاع بدن در حالت نشسته

۲۷ - ارتفاع تا زانو

۲۴ - ارتفاع تا چشم

۲۸ - ارتفاع تا زیر زانو



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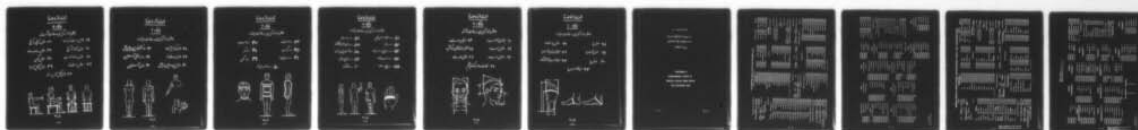
IMPERIAL IRANIAN GROUND FORCES COMBAT RESEARCH AND EV--ETC F/G 6/14
ANTHROPOMETRIC SURVEY OF THE IMPERIAL IRANIAN ARMED FORCES. VOL--ETC(U)
NOV 70 S NOORANI, C N DILLARD

UNCLASSIFIED

NL

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اندازه ها

جایگاه ۵

۱. قمره اندازه گیری در حالت نشسته

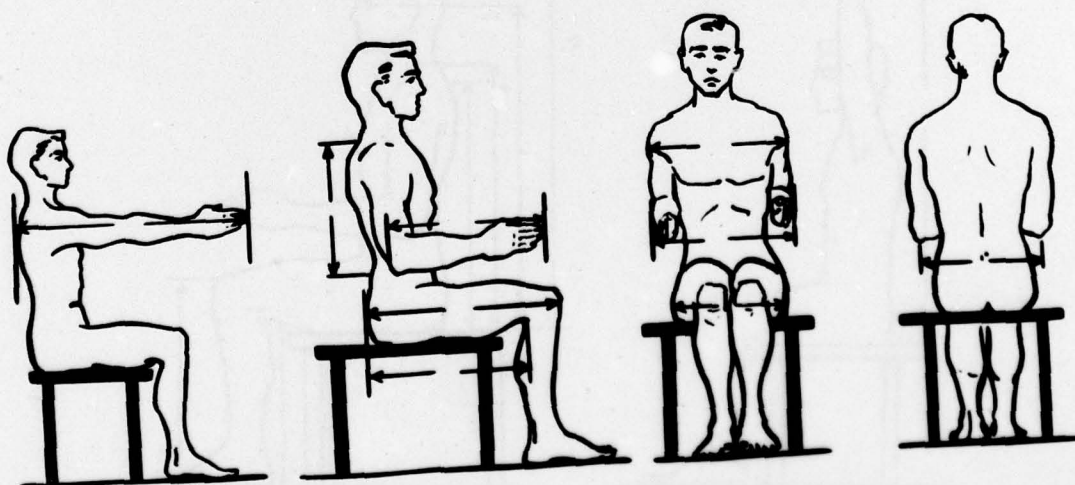
۲۹ - طول دست، کتف و بجلو ۳۳ - عرض آرنج به آرنج

۳۰ - طول شانه تا آرنج ۳۴ - عرض ساعد به ساعد

۳۱ - طول ساعد تا دست ۳۵ - عرض لگن

۳۲ - عرض شانه ۳۶ - طول کف تا زانو

۳۷ - طول کف تا زیر زانو



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اندازه‌ها

جایگاه ۶

۶ قمره اندازه‌گیری در حالت ایستاده

۴۱ - حداکثر عرض مین دو چین بغل

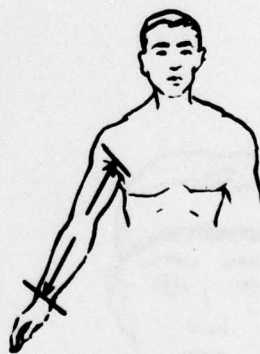
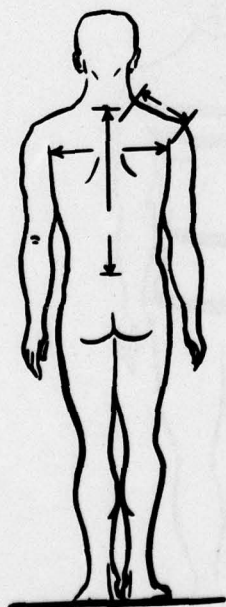
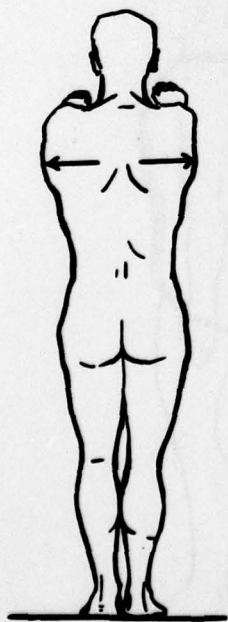
۳۸ - طول کمر از پشت

۴۲ - درز داخلی آستین

۳۹ - طول شانه

۴۳ - طول آستین

۴۰ - عرض مین دو چین زیر بغل



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اندازه ها

جایگاه ۲

۷ قمره اندازه گیری در حالت ایستاده

۴۷ - دور سینه

۴۴ - دور سر

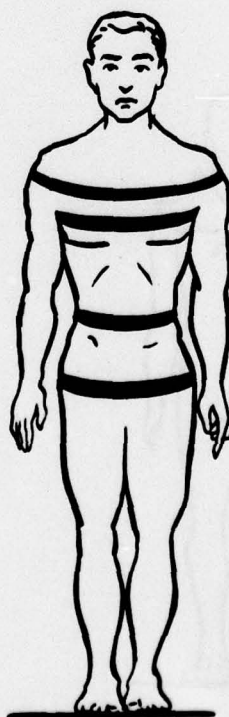
۴۸ - دور کمر

۴۵ - دور گردن

۴۹ - دور گلن

۴۶ - دور شان

۵۰ - دور عمودی تنه



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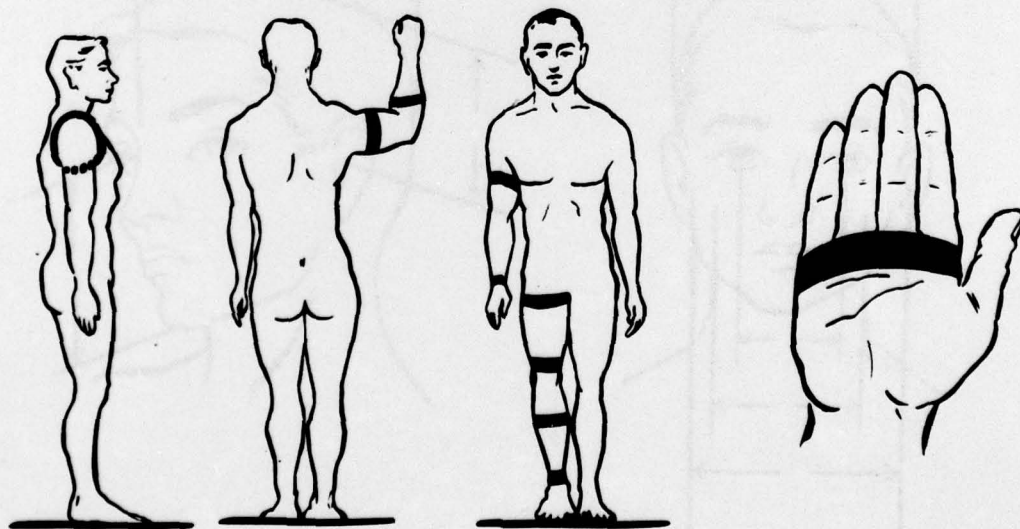
a-15

اندازه‌ها

جایگاه ۸

۱۰. قره اندازه گیری در حالت ایستاده

- | | |
|--------------------------|---------------------------|
| ۵۱ - دور شانه از زیر بغل | ۵۶ - دور دست |
| ۵۲ - دور بازو | ۵۷ - دور ران از ناحیه خشک |
| ۵۳ - دور مایچه دوسر بازو | ۵۸ - دور قسمت پائین ران |
| ۵۴ - دور ساعد | ۵۹ - دور مایچه ساق |
| ۵۵ - دور پنج دست | ۶۰ - دور قوزک |



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اندازه ها

جایگاه ۹

۲ قمره اندازه گیری در حالت نشسته

۶۴ - عرض صورت

۶۱ - بلندی تاسه

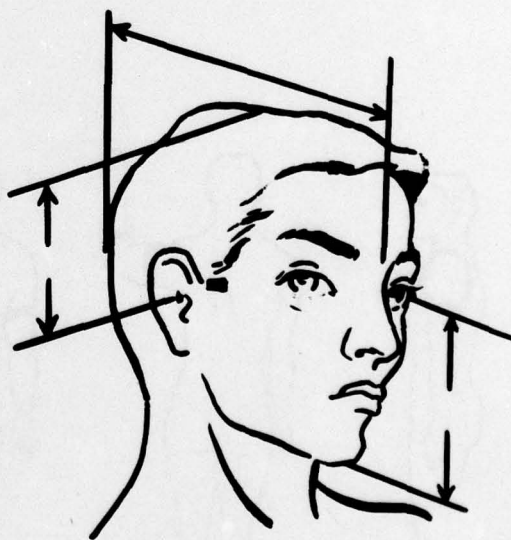
۶۵ - قطر زوائد قدامی دو گوش

۶۲ - طول

۶۶ - طول صورت

۶۳ - عرض

۶۷ - فاصله دو مردمک چشم



اندازه‌ها

جایگاه ۱۰

۷ فقره اندازه‌گیری در حالت ایستاده

۷۱ - عرض پاشنه

۶۸ - طول پا

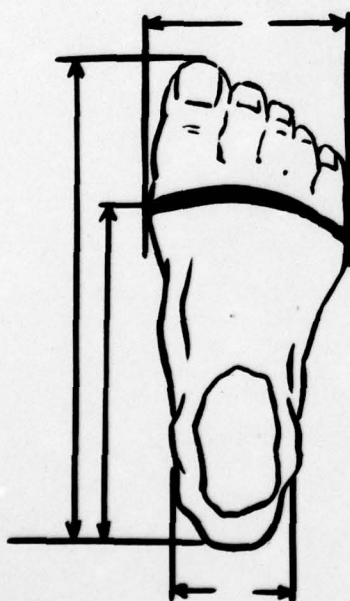
۷۲ - محیط پهن‌ترین قسمت پا

۶۹ - طول پشت پا

۷۳ - محیط منورب پاشنه تا قوزک

۷۰ - عرض پا

۷۴ - محیط قوس پا



ضمیمه ب

بررسی اندازه گیری اندام

نیروهای مسلح شاهنشاهی

فرم ثبت اطلاعات

ATTACHMENT B

ANTHROPOMETRIC SURVEY OF
IMPERIAL IRANIAN ARMED FORCES
DATA RECORDING FORM

IMPERIAL IRANIAN ARMED FORCES ANTHROPOMETRIC SURVEY - DATA RECORDING FORM

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STATION 1

Upper Thigh - 10
Calf - 12
Ankle - 14

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 2

Many Measurements with Large Sliding Caliper

Arm Span Forward - 20
Shoulder-Elbow Length - 24
Forearm - Hand Length - 28
Shoulder Breadth - 32
Elbow-Elbow Breadth - 36
Maximum Forearm Forearm Breadth - 40
Wrist - 44
Hip - 48
Vertical Thigh - 52

STATION 3

Standing Measurements with Large Sliding Caliper

Chest Length - 20
Chest Breadth - 24
Chest Depth - 28
Chest Breadth - 32
Chest Depth - 36
Chest Breadth - 40
Chest Depth - 44

STATION 4

Sitting Measurements with Anthropometer

Arm Span Upward - 20
Sitting Height - 24
Eye Height - 28
Mid-Shoulder Height - 32
Shoulder Height - 36
Elbow Height - 40
Popliteal Height - 44

STATION 5

Head Measurements with Small Sliding Caliper

Head Length - 20
Head Breadth - 24
Head Circumference - 28
Head Breadth - 32
Head Circumference - 36
Head Breadth - 40
Head Circumference - 44

STATION 6

Surface Measurements with Tape Following Contours of Body Subject Standing

Back - Waist Length - 20
Shoulder Length - 24
Waist - 28
Waist - 32
Waist - 36
Waist - 40
Waist - 44
Waist - 48
Waist - 52

STATION 7

Additional Circumference Measurements with Tape Subject Standing

Arm Length - 20
Upper Arm - 24
Forearm - 28
Wrist - 32
Hand - 36
Crotch-Thigh - 40
Crotch-Thigh - 44
Crotch-Thigh - 48
Crotch-Thigh - 52
Crotch-Thigh - 56

STATION 8

Foot Measurements with Four Measuring Feet Small Sliding Caliper and Tape

Foot Length - 20
Foot Breadth - 24
Foot Circumference - 28
Foot Length - 32
Foot Breadth - 36
Foot Circumference - 40
Foot Length - 44
Foot Breadth - 48
Foot Circumference - 52

STATION 9

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 10

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 11

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 12

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 13

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 14

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 15

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 16

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 17

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 18

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 19

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

STATION 20

Head Measurements with Large Sliding Caliper and Small Spreading Caliper

Head Length - 20
Head Breadth - 24
Forehead Breadth - 28
Forehead Circumference - 32
Ear Length - 36
Ear Breadth - 40
Ear Circumference - 44
Ear to Ear Distance - 48
Ear to Ear Distance - 52
Ear to Ear Distance - 56

ملفوظات - جلد ۱ - تھران

DAFTAR PUSTAKA

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